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ISSUE 334

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ARLEN NESS: Black Hot Legs/Fork Legs, 10 Gauge Lifter Blocks & Pushrod Tube Covers and Shift Rod

ALLOY ART: Saddlebag Hinge Covers w/ Turn Signals and Frame Stabilizer

BARNETT: Scorpion Billet Outer Primary Cover & Clear Derby Cover

CARL BROUARD DESIGNS: Rear Brake Arm and Shift Levers

COBRA: Power Flow Air Cleaner (painted)

COVINGTONS CUSTOMS: Dimpled Floorboards & Pegs, Dimpled Rocker Box, Clutch, Master Cylinder & Ignition Switch Covers, Finned Cam Cover and Speaker Grills

CUSTOM DYNAMICS: Mini Beast Avenge Air Horn (painted), Front Running Lights and 12" Plasma Rods w/ Plasma Rod Converter

DRAG SPECIALTIES: 4" Extended Premium Saddlebags and Fairing Mount Mirrors

DRAG SPECIALTIES SEATS: Predator Seat for Bagger Nation Razor Back Fuel Tank

HAWG HALTERS: 6 Piston Front Caliper

HOGTUNES: 6" x 9" Speaker Lids, 6.5" Front Speakers and 200W 4-Channel Amp

KLOCK WERKS: 6.5" Tinted Flare® Windshield, "The One" Rear Fender, Chrome License Plate Frame

PAUL YAFFE'S BAGGER NATION: Side Covers and Razor Back Fuel Tank

PYTHON: Chrome True Dual Headers and Rayzer Black Slip-On Mufflers

RC COMPONENTS: Majestic Wheels and Majestic Rotors & Pulley

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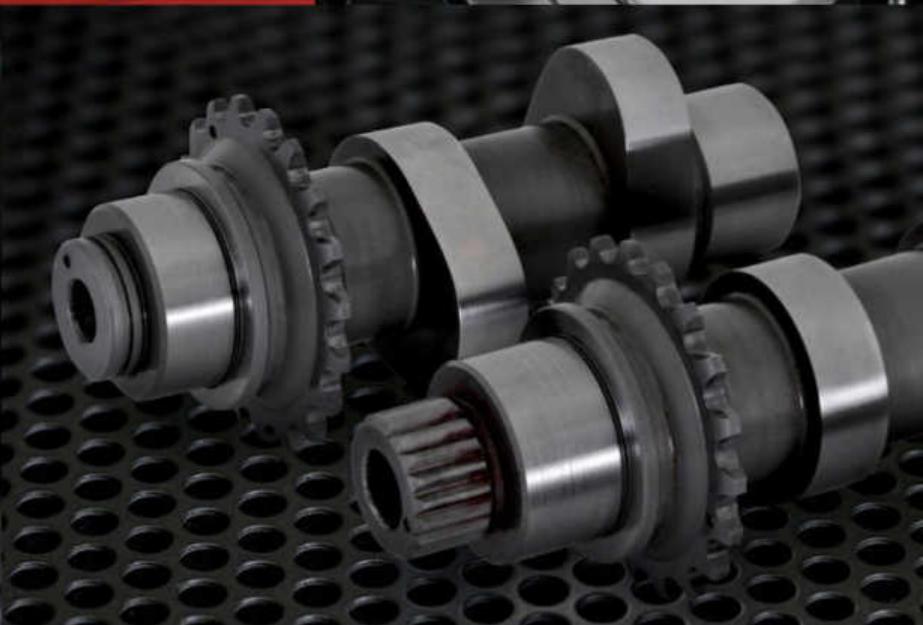
OVER FOUR DECADES PERFORMANCE MACHINE FORGING FORWARD
INDIVIDUALISM COMES STANDARD. CHARACTER IS BUILT. ICONS ARE REMEMBERED.

**VANCE
HINES**



A black and white, close-up photograph of a Vance & Hines motorcycle exhaust system. The image focuses on the polished chrome finish of the exhaust pipes and the side panel. The Vance & Hines logo is embossed on the side panel, featuring the brand name in a stylized, outlined font with a flame-like graphic above it. The background is dark, making the reflective surfaces of the metal stand out.

**VANCE
HINES**



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TEMPERATURE

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ITEM

100% ECONOMY

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HOTTEST CUSTOM IRON

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This Springer spans 75 years' worth of H-D style and tech

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EDITOR-IN-CHIEF Buzz Kanter

EDITOR Chris Maida
ChrisM@AmericanIronMag.com

ART DIRECTOR Charles W. Queener

ASSOCIATE EDITORS Dain Gingerelli
Tyler Greenblatt

ASSISTANT EDITOR Stephen Long

SON OF A PREACHER MAN Sam Whitehead

CLASSICS EDITOR Jim Babchak

WOMEN'S POV EDITOR Cris Sommer Simmons

ONLINE MANAGER Matt Kopec

COPY EDITOR Keith Blair Powell

DESIGNERS Matt Kopec
Tricia Szulewski

CONTRIBUTING WRITERS Glenn Abbot, Jim Babchak, John Frank, Dain Gingerelli, Don Gomo, Jeff Hennie, Donny Petersen, Wayne Scraba, Cris Sommer Simmons, Dan Umstead

CONTRIBUTING PHOTOGRAPHERS Markus Cuff, John Frank, Dain Gingerelli, Chelsea Maida, Dino Petrocelli, Pam Proctor

SUBMISSIONS: AMERICAN IRON MAGAZINE
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Requests should be directed to Buzz Kanter.
AMERICAN IRON MAGAZINE is published by
TAM Communications Inc., 1010 Summer Street,
Stamford, CT 06905, 203/425-8777, FAX 203/425-8775,
AIMag.com. PRINTED IN THE U.S.A.

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ADVERTISING DEPARTMENT

203/425-8777 • FAX 203/325-2254

ADVERTISING DIRECTOR

Terry O'Brien
203/425-8777, ext. 112
TerryO@TAMcommunications.com

Ken McCurdy

203/425-8777, ext. 108
KenM@TAMcommunications.com

ADVERTISING COORDINATOR

Nicole Hart
203/425-8777, ext. 116
NicoleH@AmericanIronMag.com

TAM

COMMUNICATIONS, INC.

PRESIDENT/PUBLISHER Buzz Kanter

SENIOR VICE PRESIDENT/ Gail Kanter
ASSOCIATE PUBLISHER

CHIEF OPERATING OFFICER Terry O'Brien

CHIEF FINANCIAL OFFICER Frank Thiel

CREATIVE DIRECTOR Charles W. Queener

SENIOR STAFF ACCOUNTANT Claudia Garavito

STAFF ACCOUNTANT Kathy Greco

ADMINISTRATIVE Rosemary Cafarelli
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My Runaway Harley

I was quickly running out of time to prevent an environmental disaster



IN ALL THE YEARS I'VE BEEN RIDING motorcycles, I can't remember this happening to me; after I turned my back on one of my old Harleys, it somehow rolled away as fast as it could. No, I'm not delusional or making this up.

A year or so ago I bought a good-looking 1930 Harley VL with a sidecar. It was a project for *American Iron Garage*, our all-tech/DIY magazine. The VL had been parked in a basement for years before I got it, so it needed servicing. Well, to make a long story short, we took it to RetroCycle in Boonton, New Jersey, for a little sorting out. The bike ran so well afterward that I decided to take it to my vacation cabin up north for fun rides in the country. And that's where it tried to run away.

Sidecar rigs, in case you have no experience with them, are more stable — and mobile — than standard two-wheelers. They can roll a long way with no chance of tipping over. I trailered

this one up north to get it inspected and registered before proceeding to the cabin where I rolled it out of the enclosed trailer. When I returned to the trailer to unload some other stuff, I heard something behind me. I turned to see what it was, only to discover the old Harley rolling backwards, away from me. It was heading downhill to the river less than 100 feet away. And it was picking up speed.

There was nothing in the runaway sidecar's path to slow or stop it. So I sprinted after it as fast as I could. It was obvious from the start that I was quickly running out of time to prevent an environmental disaster. I envisioned my motorcycle leaking gas and oil as the current dragged it downstream. I had no time to reach across the sidecar to grab the brakes before the rig crashed into the water.

Running out of time and options, I managed to catch up to the runaway Harley. It was only a few feet from the drop-off into the river. I knew I had only one chance to stop it. Using both hands and every ounce of energy I could muster, I shouted out loud before shoving the handlebars as hard as I could. The front wheel snapped hard to the right. Miraculously, the bike spun around and came to a sudden stop — mere seconds before hitting the water. I couldn't believe what had just happened.

Painfully gasping for air, I managed to push the rig away from the river. I reached over to slide the handshifter into gear to prevent the VL and sidecar from rolling backward again. Then I collapsed to the ground, lying there thinking about all the things that could have gone wrong had I been a few seconds late. Eventually my breathing and heart rate returned to normal. I got up and pushed the old rig across the lawn and into winter storage.

Daytona Bike Week & Our Garage Issue

I PLAN TO BE IN DAYTONA FOR AS MANY of the Bike Week events as possible. If you see me there, please say hi. I always look forward to Daytona, especially if the winter has been particularly harsh here in New England.

Billy Lane recently announced he had to postpone the Sons of Speed motorcycle boardtrack race scheduled for this Daytona Bike Week. No need to go into all the details here, but Billy told me he has reserved the New Smyrna Speedway, just south of Daytona, for later in the year. The plan is to race the old boardtrackers there October 14 and 15, 2016, during Biketoberfest. Mark your calendars now so you don't miss what should be quite a show.

As many of you know, *American Iron Magazine*'s tech and DIY (Do It Yourself) articles are very popular. But we can fit only so many of them in each issue to run with all the non-tech articles, too. So if you're looking for more how-to and tech, we have good news — the next issue of our newsstand special, *American Iron Garage*, goes on sale a week after this issue hits the newsstand. While it's not included in an *AIM* subscription, you can buy it at all store outlets that offer *American Iron Magazine*. If they sell out, you can order *AIG* from www.Greaserag.com while supplies last.

Ride safe, ride smart, have fun.

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Publisher/Editor-In-Chief,
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Heading To Daytona!

*... when Plan A doesn't work out,
you should have Plan B ready to go*



IN MY LAST COLUMN, I TALKED about how wintertime in the Northeast is the time to tackle big projects since the weather is not exactly the best for a motorcycle ride. And though that's true, I always seemed to be able to get in my yearly ride to Daytona for Bike Week in March. That is, except for the last few years. Truth is, for the last three years we've been getting blasted with snow! We normally get our portions of the white stuff in inches at a time. Maybe it'll total a foot or so, but it takes a few snowfalls to get that high. Of course, the roads and areas in front of our garages are kept clean, since it's easy to deal with snow when we get it in small amounts. However, for the last three years, we've been getting our snow by the foot, sometimes two, at a time. And though we can and must shovel it away from our sidewalks and garages, there's always lots of ice left behind. By the time March rolls around, we're taking a big chance trying to get a bike safely out of a garage and down the local roads. Sure, the highways are fine, but first we've got to get to them.

As with all things, if Plan A doesn't work, we should have Plan B ready to go. Although it's only the first week of January, as I write this the temps have

already dropped into the single digits at night (7 F in nearby Danbury), so I'm guessing this winter is going to be pretty much like the last few. So my Plan B for this year is to drop a bike at my older brother's place in Virginia Beach and ride down to Daytona from there. Yeah, it's cheating, but only a little bit. Whenever I would ride down, the trip to just south of Baltimore took all day, since I had to stop often because it was so friggin' cold! Starting in Virginia means the worst weather is behind me and I don't have to pack a ton of cold weather riding gear. Nice! I'm liking Plan B more and more.

As for getting a bike to Virginia Beach, I'm moving my older daughter to Florida (we leave tomorrow), and we're traveling right past my brother's place on the way down. I'll leave a bike there now, so it's all ready to go when I head down to Daytona with Steve Lita, the editor of our sister publication, *Motorcycle Rides & Culture*, in the company truck. So why don't I just take the bike to Virginia in the company truck in March? Steve is always returning a test bike or two whenever we go to Bike Week, so the truck is already full of motorcycles. However, I'll be able to get a bike in there on the way back.

Hope I don't have to revert to Plan C...

See you on the road.

Chris Maida
Editor



Chris Maida

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Men's Cutthroat Jacket

Women's Sheared Beaver Jacket

2016 Kickstart Classic

IT'S TIME TO START GAPPING THOSE IGNITION points and checking that kick starter, because the 2016 Motorcycle Kickstart Classic has been announced! Come join us at Wheels Through Time museum in Maggie Valley, North Carolina, on July 28 and 29 for two days of riding the Blue Ridge area with fellow vintage motorcycle enthusiasts.

All years and brands of two- and three-wheelers are welcome to ride, although we ask that those equipped with kickstarters be allowed to lead the pack. We need the new bikes to pick up parts as they fall off the old ones! For the most up to date information, visit AIMag.com and follow us on Facebook.



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Dennis Kirk Fat Boy Giveaway

THE BEST THING ABOUT A CUSTOM MOTORCYCLE, simply put, is to own and to ride it. And that's exactly our plan for one lucky person. *American Iron Garage*, along with *American Iron Magazine* and *Motorcycle Rides & Culture*, has teamed up with Dennis Kirk to build a customized Harley Fat Boy. We are going to show, step-by-step, how we customize it in the pages of *American Iron Garage* over the coming year, and then feature the finished bike in the pages of *AIM*. After that, we're going to give it away. Working with the good folks at Dennis Kirk, we are approaching this project as we expect most riders would. We are limiting the improvements and upgrades to what a typical rider and home wrench can do alone in the garage with a real-world budget. Subscribe to *American Iron Magazine* or *Motorcycle Rides & Culture* to be automatically entered to win. Or you can enter with no purchase necessary at DennisKirk.com. For more information, visit AIMag.com.



Bike Week Happenings

THE BIG 75TH DAYTONA BIKE WEEK IS RUNNING FROM MARCH 4 TO 16. HERE ARE some don't-miss events and bike shows occurring during Bike Week:

The Perewitz Custom Paint Show is happening on Wednesday, March 9, starting at 11 am at Jesters Live, at Destination Daytona. If you've got paint that demands to be shown off, bring your bike to the Perewitz Paint Show and show what you've got! Or bring your buds and feast your eyes on acres of amazing custom paint jobs.

The World's Famous Rat's Hole Show will be held for the 44th time at Daytona Bike Week this year on Saturday, March 12, at 10 am, in the parking lot behind the new Indian dealership. All entries will receive free Rat's Hole stuff. All bikes, including those preregistered, must enter and exit from Dr. Mary McLeod Boulevard and Beach Street. All bikes must be in place by 10 am. Judging is from 10 am to 4 pm, and awards are at 5 pm. Famous Rat Trophies will be awarded in all classes. All bikes must start at the gate.

Flat Track motorcycle racing comes to the Daytona International Speedway all day on Thursday, March 10 and Friday, March 11. Riders will attempt to stay upright amidst large packs of bikes, drifting through tight turns as they battle bar to bar on the quarter-mile track in a main event that is a 25-lap race to the finish.

The 26th annual Boardwalk Classic Ride-In bike show is happening Friday, March 11 from 11a m to 5 pm on the Daytona Beach Boardwalk. The event is free to the public, and bike registration costs \$25 and is held from 8 am to noon. Sponsors include the Boardwalk Merchants, *Full Throttle Magazine*, and Pepsi-Cola. The Fran Haasch Law Group will sponsor 57 trophies in 20 classes. Best of Show wins \$500 cash.

The annual Daytona 200, the race responsible for giving us Daytona Bike Week, runs on Saturday, March 12 at 1 pm at the Daytona International Speedway. The Daytona 200 kicks off the 2016 motorcycle racing season, featuring American Sportbike Racing Association's (ASRA) 600cc sportbikes battling on Daytona's famed road course for the coveted victory and a Rolex Cosmograph Daytona. ASRA and the Championship Cup Series (CCS) will have a full complement of road races Thursday, March 12 through Sunday, March 15. For tickets go to DaytonaInternationalSpeedway.com or call 800-PITSHOP.

Sons of Speed has announced that it is postponing the inaugural race that had been set to take place at New Smyrna Speedway during Daytona Bike Week 2016. The debut race date is to be determined. Inspired by early 20th century boardtrack racers, the Sons of Speed race harkens back to a stripped-down, wide-open approach to motorcycle riding. Each racer will sit astride identical hand-built racing chassis holding pre-1925 1000cc American V-twin engines, and most racers will customize their machines. Our own Editor-In-Chief Buzz is set to compete in this new race series.

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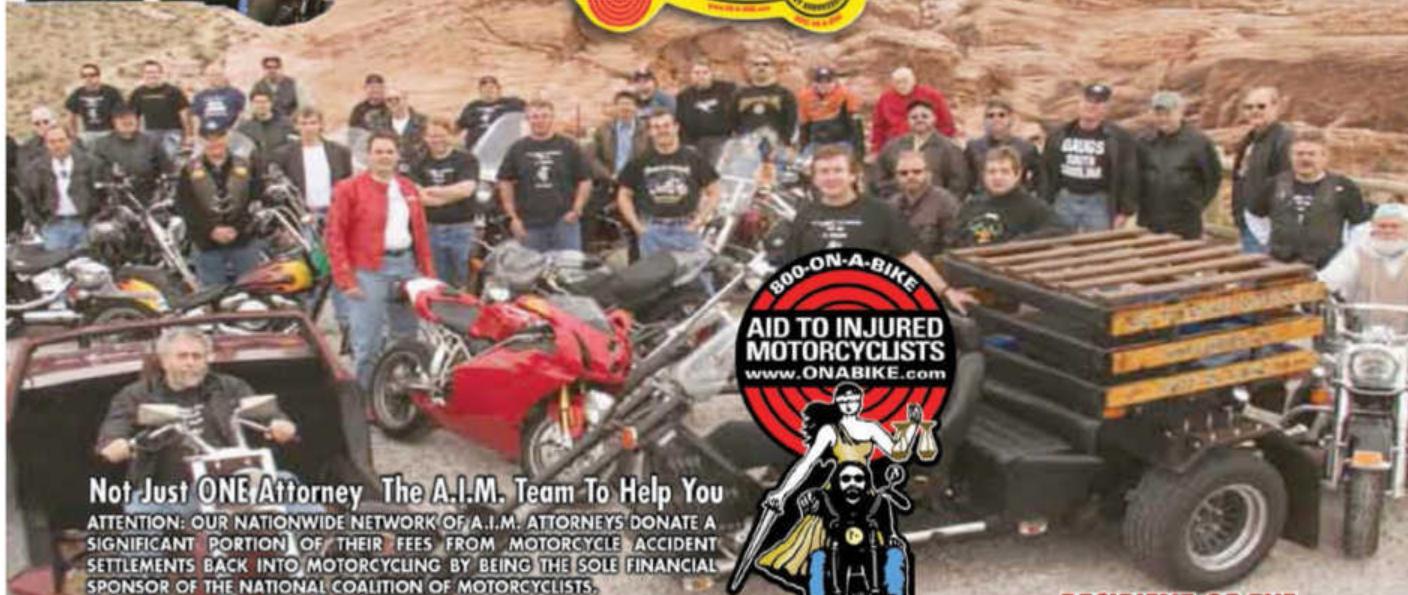


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HOGs At The Museum

THE HARLEY-DAVIDSON MUSEUM IS SWINGING ITS DOORS WIDE OPEN TO ALL Harley Owners Group (HOG) members around the world by adding unlimited admission and VIP access to more than 112 years of Harley-Davidson history

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tary admission to the museum any time they visit simply by showing their membership card at the door. HOG members will also enjoy exclusive members-only access to programs and benefits at the museum and online. For more information, visit H-DMuseum.com.



RIP Ray Price

THE AMERICAN MOTORCYCLIST ASSOCIATION and *American Iron Magazine* extend their condolences to the family of AMA Motorcycle Hall of Famer Ray Price, who passed away on December 16 at the age of 78. Ray was the father of drag racing's Funnybike, designer of the motorcycle wheelie bar, and developer of the two-speed automatic racing transmission. He was an inductee of the AMA Motorcycle Hall of Fame. Ray Price Harley-Davidson in Raleigh, North Carolina is one of the largest dealerships in the Southeastern United States. For more information about Ray Price, visit MotorcycleMuseum.org.

Dirty Hands, Clean Content

GETTING READY TO DUST OFF THE THROTTLE WHEN THE WINTER COLD FINALLY moves on? Pick up the latest copy of *American Iron Garage*, available on newsstands 3/8, for a comprehensive checklist

of all your pre-ride checks come springtime, as well as a multitude of DIY projects and tips. *AIG* is our DIY/all-tech magazine dedicated to making your tinkering and wrenching as easy and as efficient as possible. As an added bonus, all back issues of *AIG* are available in print at Greaserag.com, and for digital delivery at AIGMag.com. Info: GreaseRag.com, 203/425-877 Ext. 114.



Mikuni Carburetors

THE COMPLETE MIKUNI CARBURETOR PRODUCTS Catalog is now available for viewing in online magazine format and downloading in PDF and JPG format on MikuniPower.com. Consumers should contact their local dealer to order Mikuni Carburetors and Parts.

J&P Ranked As Nation's Best

MOTORCYCLE AFTERMARKET PARTS AND accessories retailer J&P Cycles has been crowned as one of the nation's best in the most recent StellaService benchmarking

study. A leading consumer advocate, StellaService measured companies based on several tenets of customer service: phone service, e-mail service, chatting, shipping, and return policies. StellaService conducted a survey to find out which companies executed the best customer service from August-October 2015. **AIM**





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Warming Up

...riding too closely to a vehicle can seemingly make you disappear from a driver's sight



SPRING: THE DAWNING OF THAT season typically starts my juices flowing, because that's when my thoughts turn to my favorite time of year — riding season. But while bikers like you and me yearn to get out and ride, we need to keep in mind that this is also a time of year when, unfortunately, motorcycle crashes and fatalities cap the news. Often, we're absorbed in the excitement of rides, so any negative thoughts relating to what we love to do won't top the list of our concerns. Granted, this is the dark side of our sport, but we can take some simple steps to help protect us from catastrophe so that we can continue to enjoy each ride.

Perhaps the first thing to consider is that with the new riding season many motorists are lax in their driving habits regarding motorcycles on the road. Our absence during the winter months only compounds that problem. Consequently, as a rider, don't assume or trust drivers to see you. Some folks

say that we should ride as if we're invisible. That's not a bad idea, but I encourage you to try making yourself visible while employing that strategy.

One way to do that is to always contemplate your lane positioning in traffic. Continually adjust your placement so that other drivers see you. Also, try not to camouflage yourself. For instance, riding too closely to a vehicle can seemingly make you disappear from a driver's sight. The same goes for roadside obstructions such as trees, bushes, even traffic signs, that become points of visual distraction because they can hide you from view.

We know, too, that intersections are the prime locations for collisions with cars, so use caution when approaching them, vigilantly scanning for potential scenarios that could lead to disaster. Little things, like covering your bike's hand and foot controls so that you can minimize the reaction time for braking or veering left or right, can prove the difference between making contact and avoiding a collision. Again, don't assume what drivers may or may not do; they are capable of doing anything. Also keep in mind that a driver's action may not be on purpose; when a motorist says he didn't see you, he's probably being truthful. A bike's compact size and visual properties make it hard to spot on the road. Factor in that it's difficult for drivers to perceive a bike's speed, and you have the recipe for disaster. This certainly emphasizes our need to be more proactive with our tactics to do what we can to protect ourselves.

There are road conditions to deal with, too. Potholes and rough roads are a norm to contend with from the winter season, and the initial weeks of the new riding season typically have residual sand or cinder gravel from rain runoff and snow abatement still on

the pavement. Develop the habit of using the S.E.E. (Search Evaluate Execute) plan to help you detect what's on the surface of the road. Making sure your suspension is properly adjusted is also a key factor for dealing with unfavorable road conditions.

That brings up another important point: inspect your bike to make sure it's mechanically sound. Give your motorcycle a good look over to make sure it's ready for the new season. Use the preride inspection T.C.L.O.C.S. (Tires and Wheels, Controls, Lights and Electrics, Oil and Fluids, Chassis, Stands) as a starting point, but go further with your inspection before heading out for the first time. This not only helps prevent a possible breakdown, but it's a major safety concern to make sure your bike is in top shape and ready to roll intact.

Finally, how about a spring tune-up? Since many of us become couch potatoes during winter, our riding skills can get rusty. Sometimes it takes awhile to get back into the rhythm and groove of riding. Maybe start out with shorter trips to help you work your way up to speed, in a manner of speaking. Your mental processing may not be as sharp as it was when you parked the bike before winter set in. Consider taking a rider course to help set your mind back in gear, or to improve some of your rusty riding skills. The cost of a program can certainly have a great payback to your survival in dealing with the risks you'll encounter this riding season.

Spring is here (or coming soon) and many of us are more than ready to get back on the road with our motorcycles. So go out and enjoy each mile on your bike. And to help make every ride a memorable one, take the steps to be proficient with your strategies, skills and safety. Enjoy the ride! **AIM**



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Congress Gets It Right?

... we at the MRF were able to get some additional goodies included in the legislation that pertain primarily to motorcycles



THIS IS A TALE OF THE UNIMAGINABLE. It's a story that seems so far-fetched that it must be fantasy. But this is a true story. Your US Congress actually got something right. Unbelievable, I know, but it did. Recently, the House of Representatives' Committee on Transportation and Infrastructure reported the first long-term highway bill. The committee has been working on a highway bill for the past half dozen years with zero results, so that the bill is now seeing the light of day is nothing short of a miracle in itself.

The Motorcycle Riders Foundation (MRF) has been working with the committee over those years on failed draft after failed draft, so because of that, this is a very special bill for motorcyclists. The bill mainly spends money to repair roads, bridges, and tunnels; we at the MRF were able to get some additional goodies included in the legislation that pertain primarily to motorcycles.

First, know that for years now, the feds have been funding roadside motor-

cycle-only checkpoints. You and I were actually funding these discriminatory checkpoints with our own tax dollars. You should be a little hot under the collar about that. Well, not anymore. The MRF had language included in the bill to end the funding of those motorcycle-only roadside checkpoints. States can still conduct their own roadside checkpoints, but federal tax dollars can no longer be used to subsidize them.

The bill also includes language to create a Federal Motorcycle Advisory Council (FMAC). The sole charter of the group is to make recommendations to the sitting Secretary of Transportation regarding infrastructure issues (road conditions, pavement treatments, cable barriers, etc.). The council, if created, would be comprised of 10 individuals such as road engineers, highway planners, and road construction experts. Also the MRF and AMA have seats, along with two seats dedicated to leadership from the State Motorcycle Rights Organizations (SMRO). All council members must be licensed and active motorcyclists.

The council was originally formed in 2006 when the MRF had the language included in a previous highway bill. I sat on the council, and it was prolific with recommendations to the Secretary. A lot of good work came out of the committee, which is why it's puzzling that former Secretary of Transportation Raymond LaHood did not renew its charter.

Lastly, the proposed legislation commissions a study to determine the best way to prevent motorcycle crashes from happening. The MRF's stance is that the best crash is the one that never happened. I have grown tired of the feds marching out one study after another on motorcycle fatalities. They love to brag about how helmets save lives — which they do — but it's their

only touchstone in terms of proposing motorcycle safety, and I am sick of it.

So, I had Congress include the commission and specifically say "prevention," which disallows them from pointing to helmets at all. This would be the first motorcycle safety study that never mentions helmets. No doubt helmets are important, and should be a part of the discussion, but a helmet is not a silver bullet for preventing a motorcycle fatality. The feds need to realize that there are other factors, which they often overlook, at play when it comes to staying alive on the road.

Simply knowing how to properly operate a motorcycle, in terms of a preventive safety measure, is usually dismissed by the federal regulators who run your lives as "nonsense," and I can't tell you how many times a person with a PhD has looked me in the eye and said, "Education doesn't work." I tell them, "You may have just proved your own point, Mister PhD."

They refuse to acknowledge the intangibles of motorcycle safety, such as mastery of the craft, or looking for the subtle hints such as knowing when someone is about to change lanes before signaling. As motorcyclists we get it. Maybe it's a little bit of a sixth sense or maybe it's just watching and looking at the things other motorists don't see. So, yeah, we get it, and after years of educating the feds that we, as motorcyclists, are more street savvy than the average motorist, our lawmakers seem to be finally listening.

Now that we have some momentum, help me help you. Get to know your own congressman and write letters so that you can help to educate and enlighten him and the people in our nation's capital. Then, and only then, will the legislation they pass be more relevant to bikers in America. **AIM**

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The Numbers Are In!

The median age for female motorcyclists is 39 versus 48 for males



I SPENT THIS PAST WINTER CATCHING up on my reading. That included an interesting press release from the Motorcycle Industry Council (MIC) that focused on rider demographics. The MIC's latest Motorcycle Owner Survey (MOS) proved interesting, too, underscoring what I, and others, have suspected: Women now account for a sizeable portion of all motorcycle owners in America. According to the MIC, 14 percent of motorcycle owners are women, which is nearly double from the 8 percent reported in 2008. Wow! It's so nice to see how far we've come.

To quote my friend Sarah Schilke, national marketing manager of BMW Motorrad USA and chair of PowerLily, a group consisting of female motorcycle industry professionals, "Women continue to embrace motorcycling like never before. Of the 9.2 million owners, more of them are women than we've ever recorded. In

fact, the number of female owners better than doubled from 2003 to 2014. And, among the 30 million Americans who swung a leg over a motorcycle and rode at least one time in 2014, a quarter of these riders were women."

Among younger generations of owners, the percentage of women is even higher. Slightly more than 17 percent of Gen X bike owners, and 17.6 percent of Gen Y owners, are women. Women constitute nine percent of bike owners from the Baby Boomer generation.

The MOS also revealed the various types of bikes women prefer. No surprise, cruisers top the list, favored by 34 percent of female riders. Scooters rank a close second at 33 percent, followed by sport bikes at 10 percent. Of some 48,000 American households, women were also asked to share their top three reasons for riding motorcycles. Foremost, they answered "fun and recreation," followed by "sense of freedom" and "enjoy outdoors/nature." As for the actual purchase of a motorcycle, women rated fuel economy and test rides as the most important decision-making factors.

The survey also reveals that female riders are very safety-conscious. While 60 percent of women took a motorcycle safety course, only 42 percent of men had any formal training. In many of the state motorcycle safety training programs, women compose 30 percent of the student population. I believe that has been the average number for many years. When I took an experienced rider's course in the 1980s there were several other women in my class.

Other key survey results:

- The median age for female motorcyclists is 39 versus 48 for males
- More than 49 percent of women motorcyclists perform their own

maintenance or have a friend or relative do it, as opposed to taking their bikes to a shop

- New, rather than used, bikes are preferred by 57 percent of female riders
- 49 percent of female motorcyclists are married
- 47 percent of female motorcyclists have college or post-graduate degrees

All this is exciting news for the motorcycle industry. Women have long been a force in motorcycling, but now there are numbers to prove it. When I started riding in the late 1970s, I saw few women riding beyond groups like the Motor Maids. I know from my own experience that witnessing other women ride got me thinking that I could, too. Now, nearly 40 years later, women I meet tell me that it's so inspiring to see a woman riding a big Harley-Davidson. It's very empowering and the attitude "if she can do, so can I" is very much alive today.

We also have more and more women's riding clubs and organizations than ever, promoting events all over the country geared towards us. How cool is that?

There was a time, not so long ago, that women motorcyclists had to wear gear that was intended only for men. Few, if any, companies made boots, gloves or even jackets to fit a woman. I remember having to dress like a guy whenever I rode my bike. Luckily, I'm tall and have big feet, so I could get away with it. It's certainly much different now, as manufacturers offer something for women of all shapes, sizes and fashion preferences.

I'm just so glad we live in a free society where women are "allowed" to live as they please. Having a motorcycle — or two — in my garage gives me that freedom, and I love it. **AIM**



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ADVANCE THE H-D COLLECTIVE These two bikes are the fifth Harley-Davidsons we have owned collectively. My 2014 Street Glide and Laurie's 2015 Street Bob made perfect subjects for this beautiful autumn day in southern Oregon. We enjoy getting out and riding together whenever the opportunity presents itself, especially on gorgeous days like this. We enjoy seeing the snaps in your magazine and seeing all of the enthusiasts like us who ride.

BILL LANDIS
Medford, OR

THEN CAME BRONSON I On behalf of my friends, who have come together from around the world through the website JimBronson.com, I would like to express my sincere appreciation to *American Iron Magazine* for the excellent article about the television series *Then Came Bronson*! I would especially like to thank Jim Babchak for reflecting on the fact that, although the story is about an inspiring motorcycle journey, the real intent of the series was to impress upon viewers that life's purpose is to make a positive contribution in service to the lives of others. Unfortunately, the series was only on for one



season, but it did inspire many young people at that time to become responsible motorcycle enthusiasts.

We welcome letters on any subject, whether we agree with the writers or not. Electronic letters, both with and without photos, can be e-mailed to Letters@AmericanIronMag.com. Photos should be high-resolution, JPEG images (at least 300 dpi at 4" x 6"). Please also include your name, address, and a brief description of each photo. And although we reserve the right to edit, shorten, or change your letters so they make no sense at all, we do promise not to mess with your images. That means no phony mustaches, tutus, etc. (However, we may slip an issue of *American Iron Magazine* into the photo somewhere.)

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We at JimBronson.com are those "young" enthusiasts that were so impressed with the show that we feel that it's important to keep the story alive so that future generations will have the benefit of the journey down that "long, lonesome highway." Many of us have built exact replicas or tribute motorcycles, and enjoy getting together on occasion and riding in the spirit of *Then Came Bronson*. I encourage anyone that loves life and the adventures of motorcycling to visit the web site and discover how this one-season television series had the power to enrich one's life forever.

MARK FRITZ
Buffalo, NY

WIND IN THE FACE ...

This is my 2005 Heritage, the paint is my own custom design. I purchased



this bike new in 2004 and took my first ride to Sturgis; Wyoming, Idaho, and Montana and have not stopped since. I ride with my two brothers and nephew. My motto is: "Wind in the face, problems in the mirror!" Ride on!

MARC TORRISI
North Andover, MA

HOORAY FOR DON GOMO! In response to Don Gomo's article, I'd like to say, "Hooray." You are one of the few people who actually get the fact that when we (all motorcyclists) swing our leg over our machine to ride, we are the responsible parties for all that happens. Strategy, skill, and safety gear are so understated in the riders

here in the motorcycle community in Southern California. It's more like how fast you can go and how far you can wheelie your bike on the public highways. ATGATT: All The Gear All The Time, is seldom heard and seldom seen. For the 45 years I have been riding, my mantra has been, "Ride to be seen."

So to your article, Don, I say, "Hooray," because you get it. Under your picture, you perfectly make the point, "We are the ones who need to take the first step to reduce the rising accident statistics." Amen, Don Gomo, Amen.

In response to Jeff Hennie's article Freedom Road I can say, "Hooray," as well. Finally someone gets the fact that states have control of "the same old thing." Never changing curriculum and just basic skill levels of operation are taught at rider safety training courses.

Each state has its own set of problems, especially within large cities. The MSF flatlines its class as all the same, everywhere. Love the mag.

**CHUCK
POLER**
Via Internet

**LEFTS &
RIGHTS** In issue 331, Jim Babchak answers a reader's letter and talks about mixing up his lefts and

rights since childhood. He then said, "two lefts don't make a right." That's true, Jim, but THREE do!

ED CIAS
Via Internet

STILL HIGH ON MOTORCYCLES

Yes, I, too, have had a crazy dream since as far back as I was a kid. It all started with a bicycle by extending the front end and making it look like a chopper. Then, at the age of 12, I took a mini bike and tricked it out. Then, I rode in the backyard on a Honda CB100 with leg burns at no extra charge. I moved on to racing motocross on a Suzuki 185, to trading a Volkswagen for a Kawasaki 400. I



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finally made it to the Harley world by saving up my coins. Scratching and wondering: whatever happened to my Vroom bicycle?

HARRY MICHALEWICZ
Denton, TX

MY HUSBAND'S GIRLFRIEND

I snuck a shot of my husband's girlfriend after he went into the store in a



small town called Shoshone, California. It's a 2014 CVO deluxe with a lot of extras that he's put on it. It would really be nice to see it in your magazine. He's been riding since he was 16. Now 53, he still likes to ride whenever he gets a chance.

MARIA
Via Internet

THEN CAME BRONSON II "Man, I wish I was you." That man in the car, sweating in the traffic jam was me, and even now, a lifetime later, I can feel that long, lonesome highway pulling me like an outbound tide. 1969 began my stint as married with children (and without money), and I envied the hell out of Jim Bronson. I bought the record, built the plastic model, and read the novelizations. Those things are still in a closet somewhere and, of course, in my head. It was another 45 years until I bought that Sportster. Okay, it's blue, not red, but I've learned that freedom is relative. And you don't get there without sacrifice. I'm not going to become a drifter; I'm too old, and my idea of footloose adventure is a bit tamer, as is the road itself these days. But I don't put on my helmet and boots on a Sunday morning and head for those country roads without glancing in the mirror and thinking about Bronson. "Man, I'm glad it's finally me." Thanks, Jim Babchak, for bringing back a memory and sharing it.

GLENN GEIST
Via Internet

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SURE, LISA GETS ALL THE

CREDIT! This is my 10-year project and daily rider with 200,000 miles on



it, as it currently looks. My wife, Lisa, is its inspiration. Thank you for your great magazine.

JIM COURTNEY
Gilbert, AZ

OIL CHANGE OOPS Chris, I just wanted to drop you a note regarding the article on motorcycle seasonal storage. While I agree with everything that was said in the article, I feel the author left out one important step in the oil change process. Yes, it is very important to change the oil before storage, but equally important is that once the oil and filter have been changed, the engine should be restarted and run for 15 to 20 minutes. This last step is important because you must circulate the new oil throughout the engine before storage. If you don't run the engine, the only components that benefit from the oil change is the oil tank and dipstick.

KEN CIOCCI
Sales Manager
Spectro Oils

BRAKING BAD Mr. McCarthy, thank you so much for the braking article. I would love to see some real-world testing on this. And while we are at it, we need to throw in some real-world things for the four-wheelers, like cellphones and texting. Chris was right. You did need to do this story. If you don't treat every car like it's trying to kill, I am sure it will. I know what

we as riders can do to help. There is what is called a "two-second rule" for cars, and it could work with motorcycles, as well. You watch for a landmark and as the car you are following passes it, count out two seconds. If you pass that landmark before two, you're too close to whatever you're following. I like to count to what would be 2-1/2 seconds. I wish everyone would do this. But we always have those that think they are more important than anyone else,

or that they can tailgate because they are a better driver than everyone else. Wake up, people! We must think about our driving or riding when that's what we are doing. We must maintain our cars and bikes. Don't tailgate anyone, no matter what we are on or in. Please don't pass on this; dig deeper with it. There are older cars out there. This is a topic that everyone needs to see. If I were voting for the story of the year, this would be it.

PAUL JOHNSON
Via Internet

HARLEY VS. VICTORY I I've been reading *AIM* for many years, but this is the first time I've felt the need to reply. The letter from John Jett in #330 provokes a response. I've been a Harley dealer technician for nearly 40 years, and a master mechanic for the last 26 years. I think Donny Petersen's comparison of H-D to Victory is the much-needed kick in the pants that Harley needs. Harley no longer represents my idea of a truly American company, upholding the ideals of family and country, with the increase in outsourcing of product and jobs under the threat of withholding severance pay for not training their foreign replacements. How much of the motorcycle is still manufactured here compared to Victory? With all this money savings, I don't see the price of motorcycles or parts going down. Harley has truly for-

gotten the people who made it great and now it worships at the altar of increasing profit at any cost. Shame on Harley. I'm equally surprised that more of this issue has not made more press, especially in *AIM*.

BOB ABBOTT
Via Internet

HARLEY VS. VICTORY II Donny Petersen's article on the Victory Magnum vs H-D Road Glide certainly was entertaining, but apparently he needs a long H-D detox program before any such comparative article is ever written by him again. So, let's see, the Magnum handles better, leans better, is easier to service, is faster and puts out more torque and horsepower, has better aesthetics including saddlebags, and, according to the author, the ride is a toss-up. Oh, yeah, you don't get shaken to death by the ancient H-D engine, either, but at the very end, Petersen calls it a draw. Really? He nearly had an orgasm telling how the Victory's floorboards are adjustable when H-D's are fixed and adjusted only with a kit that costs more money. But the H-D Kool-Aid has saturated his brain cells enough to avoid totally telling anyone that anything is better than what he has been riding for decades. A very good comparison ended in a horrible split decision. The Victory won hands down. Period. But thumbs up to Harley-Davidson for brewing such a potent drink that quite a few can't stop drinking. Is it too many H-D T-shirts in the dresser?

DAVID MILLER
Tampa, FL

CAN YOU BLAME THEM? My mom and dad, both 66 years young,



went to Sturgis on their 1998 Dyna.

MARK PLAGMANN
Via Internet **AIM**



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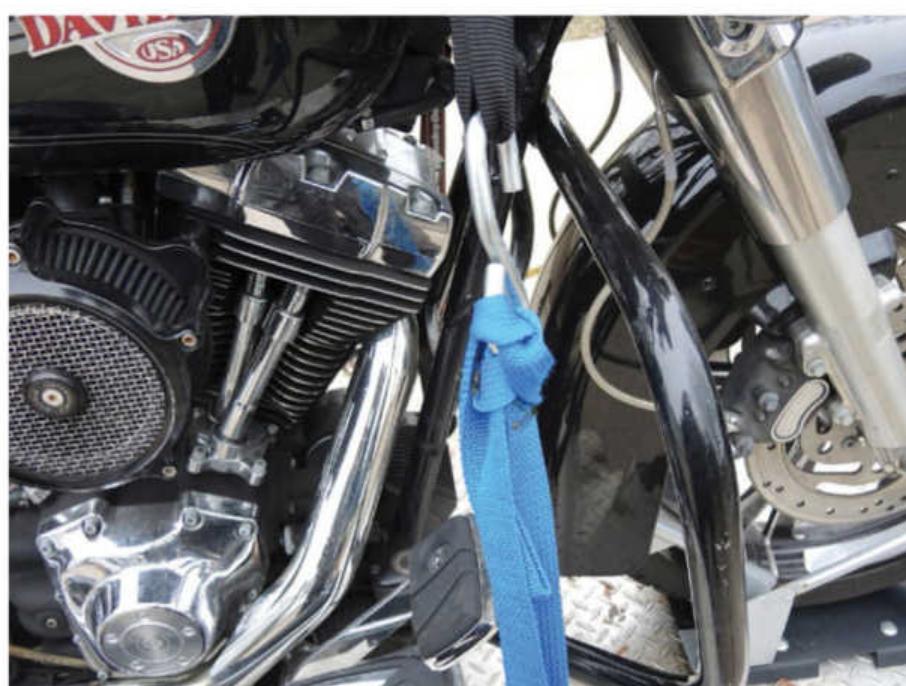
Tips on what to do and not do when you move your bike with a trailer or truck

HERE ARE NUMEROUS REASONS TO TRANSPORT A motorcycle on a trailer or truck. Maybe the bike broke down. Maybe someone lost his winter storage location. Sometimes riders lose their driver's licenses and need a buddy to retrieve their bike from an impound lot. Whatever the reason, it's important to transport the bike safely and securely.

Straps

IN ADDITION TO THE OBVIOUS TRUCK OR TRAILER, YOU'LL need straps to secure and hold the bike. The best straps for transporting a motorcycle come from motorcycle dealers and independent shops. The straps from lumberyards and hardware stores may not be strong enough to cope with the weight of a bike on a trailer. Straps have two strength ratings. The first is the breaking strength, and the second is the working load. While browsing a lumberyard not long ago I saw a set of four ratcheting tie-down straps for only \$20. These are not the kind of straps you want to use when hauling a motorcycle. Although the breaking strength was touted as being 900 pounds, the working load was only 300 pounds. Plus, the rubber-covered hook on each end of the each strap was not very robust. I've heard anecdotal reports of metal hooks bending and straightening under tension.

Excess strap has been tied around the hook in case the cam buckle on this strap slips. Note the hookless strap that goes around the bike, so the hook doesn't touch the bike.



You'll have a few options when shopping for tie-down straps. There are cam buckle straps, ratcheting straps, and endless loop straps. Cam buckle straps generally have a vinyl-covered hook on one end and a bare metal hook on the other. The bare metal hook goes to the attachment point on the truck or trailer, and the vinyl-covered hook is placed around a secure spot on the motorcycle to prevent scratches. The end of the strap protruding from the cam buckle is pulled tightly and you're almost done. Have someone sit on the bike to compress the suspension and pull the strap again. Now it's tight. Cam buckles work because a knurled area inside the buckle grabs the strap and holds it. If you're using straps with cam buckles and want extra security, tie the end of the strap protruding from the cam buckle in a jam knot to limit slippage. Releasing a cam buckle is as simple as pressing on the spring-loaded lever that has the knurled area on the side facing the strap.

An alternative to the cam buckle is the ratcheting strap; there are two types: hook and endless loop. As the name implies, ratcheting hook straps with a vinyl-covered hook at one or both ends can be used to secure a bike in a truck or trailer. With the vinyl-covered hook attached to a secure spot on the motorcycle and the bare metal hook in



Two types of straps are the cam buckle and the ratcheting strap.

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the attachment point on the truck or trailer, the ratcheting mechanism is used to tighten the strap.

The endless loop ratcheting strap is less common but totally eliminates the chances of a hook damaging the paint or chrome on a bike. The disadvantage of the endless loop strap is that its length must be slightly more than twice the distance between the attachment point on the truck or trailer and the place where it will loop around a solid part of the bike. When using an endless loop strap, it should be put through the attachment point on the truck or trailer, then through a solid part of the bike before going back to the ratchet. Pass the strap up through the slot in the ratchet drum and pull it snug before using the ratchet to tighten the strap.

Whichever type of straps you decide to use, avoid making them too tight. The straps should be tight enough to prevent the bike from moving from front to back and side to side. The straps should also be tight enough to prevent the bike from bouncing when the trailer goes over bumps in the road. Some inexpensive trailers have no suspension. Every time the trailer's wheel hits a bump, the entire trailer can bounce. Avoid overtightening the straps because if the fork is compressed for a prolonged period of time, the seals may be damaged, and you may find a puddle of fork fluid under the bike when you reach your destination. Compressing the front forks no more than halfway should do nicely.

Both the hook strap and the endless loop strap should come with instructions regarding their proper use. Here's a tip that may not be in the instructions. Lubricate the ratchet mechanism periodically. All it takes is a small amount of lube sprayed on all the moving parts of the ratchet and the release levers. A corroded ratchet may be difficult to use and

could accidentally release if the pawl doesn't properly engage the teeth on the ratchet drum.

Ramps

GETTING THE MOTORCYCLE ON THE trailer or in the truck often presents a challenge. The loading process generally involves a ramp of some sort. Ramp design and quality have improved with advances in technology and competition between manufacturers. Modern ramps also need to be much stronger to accommodate the weight of modern bikes. For example, a 1949 Hydra Glide had an advertised dry weight of 560 pounds while a 2016 Road King dry weight is 779 pounds. If you're going shopping for a ramp, avoid the kits that consist of two aluminum extrusions that bolt onto the ends of an 8"- or 10"-wide plank. The limiting factor with these ramps is the strength of the wood the extrusions are bolted to. Some of the best ramps currently on the market are made in three sections that fasten together side by side to form a ramp approximately 3' wide. These ramps are made in three sections in order to accommodate different vehicles. Two sections can be used to load an ATV. Three sections can be used to load trikes when the sections are spaced the appropriate distance apart, and can be fastened together, side by side, when loading a motorcycle.

You want the ramp to be about 3' wide when loading a motorcycle for safety reasons. Some riders overestimate their skill and have problems when partially up the ramp. If that happens, there's nowhere to put their feet down (ouch!). Plus, the outer sections of a three-piece ramp add stability and strength to the center section when properly fastened together.

In addition to width, two other important ramp characteristics are length

and arch. I've seen bikes loaded onto trucks with a ramp as short as 4' and as long as 8'. Why is there such variation in ramp length? Three factors determine the safe length of a ramp: motorcycle wheelbase, motorcycle ground clearance, and the height above pavement of the truck tailgate or trailer bed. The height of the truck tailgate or trailer bed, and the effect these dimensions have on ramp length, should be obvious. The importance of the motorcycle wheelbase and ground clearance is subtle until there's a problem caused by a ramp that's too short. Suppose you're using a short ramp and trying to load a stretched-out chopper onto a full size pickup truck with a bed that's 30" above the pavement. The angle between the pavement and the ramp seems a bit steep, but you and two of your buddies roll the bike up the ramp. The front wheel is on the bed of the truck box when the bike gets hung up on the end of the ramp where it meets the end of



Hookless straps can be used to avoid having metal hooks in contact with cables and wiring harnesses.



A ratcheting strap can be used to secure the front wheel to a wheel chock.



The bare metal hook attaches to the truck or trailer while the vinyl-coated hook is used on the bike.



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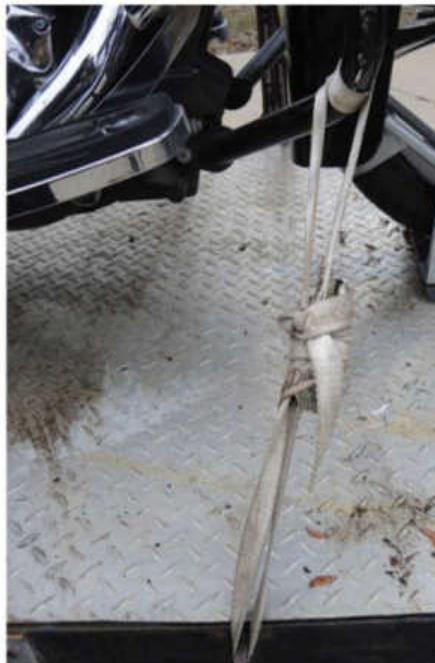
HOW IT WORKS

the tailgate. The solution to this problem is either a longer ramp or an arched ramp. Some ramps have a bit of an arch built in, which makes the approach a few degrees steeper, but then levels off at the end fastened to the truck to avoid clearance problems when loading or unloading the bike.

Please note in the previous sentence the words "fastened to the truck." The ramp must be fastened to the truck or trailer it's being used with. The Internet has numerous videos showing loading failures involving ramps that were not properly fastened to trucks and trailers. The results are never pleasant.

Strap Location

ONCE THE MOTORCYCLE IS SAFELY ON the truck or trailer, the big question is where should the straps be fastened to the bike? Begin by getting the bike upright. Never transport the bike on its sidestand, which is designed to hold the bike's weight when it's stopped. The sidestand is not designed to hold the bike's weight plus the additional stress placed on it when the motorcycle is strapped tightly down onto a truck or trailer. Add in the extra stress of the vehicle bouncing down the road, and there may be enough force to strip the threads on the sidestand's top nut. If that happens, the sidestand may drop to the



This endless loop strap is wrapped around the engine guard before passing through an anchor on the trailer. Excess strap is then tied around the ratchet to prevent it from accidentally opening.

truck bed, followed by your bike. Also, a bike on its sidestand is already leaning a few degrees to the left and may be a bit more likely to fall over.

Some riders get by with only one strap on each side of the bike. I'm a firm believer



A hookless strap permits the use of the upper shock absorber mount as an attachment point. Note the clearance between the soft hook and the saddlebag.



Releasing a cam buckle strap is as simple as pressing on a spring-loaded lever.

in having two straps on each side of the bike, and one at the front wheel to hold it in a wheel chock. If one strap lets go, the other one will hold the bike up until you can stop and correct the problem.

Do not attach straps to turn signals, mirrors, luggage racks, or accessory light brackets. Some riders attach straps to the handlebars. If you use handlebars as the top attachment point, any hooks or straps must not crush, pinch, or abrade control cables, wiring harnesses, or brake lines. Another option at the front of the bike is the lower triple tree. Wrapping the straps around the fork tubes just above the lower triple tree provides a solid attachment. Bikes with engine guards allow you to attach the straps to a very solid location, but you must wrap the straps around a spot on the guard as close to the anchor point on the truck or trailer as possible in order to reduce the possibility of strap slippage on the guard.

At the rear of the bike, the sissybar can be used as a location for a strap if it is permanently attached to the bike. If your bike doesn't have a sissybar, you might use the upper shock absorber

A LIST OF DON'TS

AN ARTICLE ABOUT SAFELY HAULING A MOTORCYCLE ON A TRUCK

or trailer would be incomplete without mentioning what not to do when loading or transporting a motorcycle.

Don't use bungee cords to secure a motorcycle to a truck or trailer. Bungee cords may be handy for light loads that are being transported on a bike, but they'll stretch and tear when overloaded.

Don't use tarp straps, either. Tarp straps are intended to hold a tarpaulin onto a truck to temporarily cover its load. The metal S-hook on each end of a tarp strap could scratch whatever part of the motorcycle it's put on, and the strap itself isn't rated for the load that might be imposed on it; neither is the S-hook.

Ditto for ropes. It doesn't matter how many knots you mastered as a Boy Scout, ropes stretch or tear, and knots can slip at the most inopportune times.

Don't use any straps that have a loop and hook fastening system at either end. This stuff is great on shoes, wallets, and some types of clothing, but don't expect it to restrain a motorcycle weighing hundreds of pounds. ■

continued on page 135



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Technospeak Explained

Part III: Various common manufacturing metals and technical terms from full wave rectification to laminar flow

WE'LL CONTINUE OUR EXPLANATIONS OF VARIOUS common manufacturing metals and technical terms starting with full wave rectification.

Full Wave Rectification

A RECTIFIER IS AN ELECTRICAL COMPONENT THAT CONVERTS alternating current (AC), which periodically reverses direction, to direct current (DC), which travels in only one direction. Converting AC to DC is a process known as rectification. The output winding of a rectifier has a center tap module that allows full wave rectification in the rectifier/regulator. Rectifiers may be made with solid state diodes, silicone-controlled rectifiers, vacuum tube diodes, mercury arc valves, and other components. Full wave rectification simply means that the alternating electrical current wave, which consists of two polarities (positive and negative), is converted to one constant polarity at its output. Full wave rectification converts both to one at the output.

Gerotor Oil Pump

IN 1977, SPORTSTERS LED THE HARLEY PACK IN SWITCHING from a gear-driven oil pump to a gerotor-driven one. Pre-Twin Cam Harley Big Twins use an external, gear-driven, dry sump oil pump. A Twin Cam pump is a twin-gerotor, crank-



mounted, internally driven, dual-scavenging, dry sump oil pump. Let's take those terms one at a time.

The gear-driven pump, like what's used on Evolution Big Twins, is okay but not the best option. This style of pump produces moderate volume and moderate pressure. The Twin Cam's oil pump produces high volume and high pressure because it uses gerotors instead of gears. The term twin gerotor is a little misleading since there are actually four gerotors: two (an inner and outer) for feed side of the pump and two (an inner and outer) for return, also known as the scavenging side. The thicker gerotors are for the return side of the pump while the thinner ones are for the feed.

These gerotors fit right over the engine's pinion shaft with the oil pump housing encasing them. That's where the crank-mounted label comes in, since the oil pump is on the flywheel assembly's (crank) pinion shaft, although the pump body is bolted to the inboard (inner face) side of the cam support plate. The gerotors fit over the pinion shaft, and the rotating crankshaft drives them. The internal part is self-explanatory as the pump is inside the engine, not outside it like on the Evolution and most predecessor Harley-Davidsons.

Evolution oil pump gears mesh with each other side by side. On the gerotor pump, an inner gerotor sits inside an outer gerotor, squeezing oil between the two, producing pressure and flow. There's one less nub on the inner gerotor than the outer one. Both gerotors have fixed, but different, centers. Each inner feed and return gerotor is driven via inside female slots that align with a corresponding elongated male slot on the rotating pinion shaft. The outer gerotors fit snugly, but not tightly, in the pump body and are held in place by the round inner circumference of the oil pump body housing that remains fixed and



A Twin Cam gerotor oil pump (right) has an inner that sits inside an outer gerotor. Evo and Shovelhead (shown) oil pump gears mesh with each other side by side.



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bolted to the inboard side of the cam support plate. The gerotor centers have the effect of being a little off-side to each other because the inner gerotor has one less outer circumference nub than the outer gerotor, which has one more inner circumference nub. This causes a space to open up between the two, which creates a vacuum that draws oil into the gap until it's full. This gap is equal to the area of the one-less tooth of the inner gerotor. The inlets and outlets of the oil pump are positioned so they are sealed by the nubs of the inner and outer gerotors as they rotate. As the gerotors rotate, the space (gap) between them moves towards the outlet side of the pump. As this happens, the gap is also getting smaller. Since oil will not compress, as the gap gets smaller, its pressure increases. Once the lobes move the gap to the outlet side of the pump, the gerotors force the high-pressure oil out the outlet discharge port. In actual operation, there's a continuous supply or return of oil into and out of the engine. Both the oil feed gerotors and the oil return gerotors operate in the same way to create feed or return oil pressure. On 1999-2006 Twin Cam 88s (except the 2006 Dyna Glide), the outer gerotor has 13 inward-facing nubs that interact with the 12 outward-facing nubs of the inside gerotor (a 12/13 nub arrangement). The 2006 Dyna Glide and 2007-to-present TC 96, TC 103, and TC 110 oil pump (#26037-06) is similar to the earlier version, but it pumps 10 percent more feed oil and scavenges 23 percent more return oil. The new pump has a 10/11 nub arrangement, which gives it increased capacity.

Dual scavenge means that crankcase oil and gearcase oil is picked up for return to the oil tank/reservoir via two ports in the gearcase compartment. The dual-scavenge ports, colloquially known as dual kidney ports, face downwards from the main oil pump body to the bottom of the gearcase to suck up oil into the return gerotors and send the oil back to the external oil reservoir. The rear, slightly longer port (tube) scavenges returning oil from the bottom end (crankcase) compartment. The front, slightly shorter port scavenges oil from the gearcase compartment. Both ports feed the removed oil into the return side of the oil pump.

As for the dry sump designation, a wet sump engine, like a Victory, stores its oil inside its crankcase. A dry sump engine, like a Harley, stores its oil supply in an external oil tank/reservoir.

Gross Axle Weight Rating

A VEHICLE'S GROSS AXLE WEIGHT RATING is listed on the right front frame downtube's DOT sticker. There are two ratings, one for the front axle and one for the rear. The total of the two will equal the gross vehicle weight rating (GVWR). The rear rating is always much higher as it partially supports the rider, almost totally supports the passenger, and usually supports the luggage. For example, a 1985-90 FXST/C Softail weighs 618 pounds and has a front axle rating of 390 pounds and a rear axle rating of 695 pounds for a GVWR of 1,085 pounds. A 1986-90 FLHT/C weighs 722 pounds and has a front axle rating of 410 pounds and a rear axle rating of 770 pounds for a GVWR of 1,180 pounds.

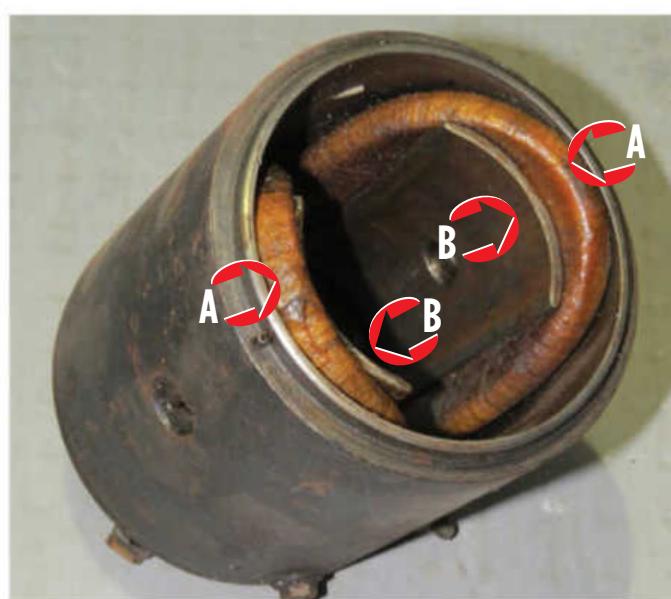
Gross Vehicle Weight Rating

THE GROSS VEHICLE WEIGHT RATING (GVWR) is also given on the right front frame downtube's DOT sticker. The GVWR is the maximum allowable loaded vehicle weight, which includes the rider, passenger, fuel, oil, luggage, etc. For example, a 1985-90 FXST/C Softail weighs 618 pounds and has a GVWR of 1,085 pounds. A 1986-90 FLHT/C weighs 722 pounds and has a GVWR of 1,180 pounds.

Growler

A GROWLER IS ONE OF THE MOST VERSATILE tools for electric motor service, be it a starter motor or a generator. The growler gets its name because of a growling noise it emits upon finding an electrical short, correctly called a short circuit. A short circuit is an electrical circuit that allows electricity (current) to travel along an unplanned path instead of the intended one. A short circuit can damage the circuit by overheating it, which can lead to fire and/or burned wiring. A growler is an electrical tool used for testing the insulation of a motor for shorted coils. A coil consists of wire wrapped many times around an iron core. A growler also consists of a coil of wire wrapped around an iron core, but it's connected to a source of alternating current (AC). When placed on the stator core of a motor, the growler acts as the primary of a transformer and the stator/armature coils act as the secondary.

I need to explain a magnetic flux before continuing. A magnetic flux is a measure of the quantity of magnetism in a magnetic field. Magnetism is created by the flow of electricity through a coil of wire. If the wire is wrapped around an iron core, like what's found in an electrical motor or generator, the strength of the magnetic field is increased. The alternating magnetic flux set up by the growler passes through the windings of the armature coil and generates an alternating voltage in the coil. A short in the coil creates a closed cir-



Magnetism is created by the flow of electricity through a coil of wire (A). If the wire is wrapped around an iron core (B), like on this Harley generator coil, the strength of the magnetic field is increased.



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cuit that will act like the secondary coil of a transformer, with the growler acting like the primary coil. This will induce an alternating current in the shorted armature that will, in turn, cause an alternating magnetic field to encircle the shorted armature coil. A feeler is a thin strip of steel, such as a hacksaw blade, that can be used as a short detector. The feeler will detect the magnetic field generated by a shorted armature. The alternating magnetic field induced by a shorted armature is strong at the surface of the armature. When the feeler is lightly touched to the iron core of an armature winding, small currents are induced in the feeler that generate a third alternating magnetic field surrounding the feeler, which will vibrate the feeler. With the growler turned on (energized), the feeler is moved from slot to slot. When the feeler is moved over a slot containing a shorted coil, the alternating magnetic field will alternately attract and release the feeler, causing it to vibrate in synchronism with the alternating current. A strong vibration of the feeler accompanied by a growling noise indicates that the coil is shorted. A growler can also be used to test series and interpoles (commutating) fields from a DC (direct current) motor; determine phasing and polarity in multi-winding armatures; test rotors in rotating frequency changers, as well as in wound rotors; test shorts between turns in taped coils before installation into an armature or a stator; act as a low-voltage isolation transformer; and preheat or bake armatures and rotors.

H-11 Tool Steel

H-11 TOOL STEEL IS USED IN DRAG RACING valve spring applications because of its high tensile strength, but it has its limitations. Titanium (Ti) is another alloying metal agent, but its use is limited to some drag race applications because of unpredictability in long-term fatigue situations. I would stick with chromium steel alloy. Tool steel is a steel alloy that is excellent for making tools, as the name suggests, especially cutting tools since it is hard and tough. H-11 is 5 percent chromium (Cr) hot work steel, which is a steel alloy that remains hard even when red hot. A 1.5 percent molybdenum (Mo) addition to the alloy imparts a very high hardening factor to this grade steel, enabling it to harden

throughout large sections using a still-air quench, which is a method of cooling steel. We'll explain quenching later in this series. H-11 steel has good resistance to softening at elevated temperatures, but its main attribute is a high degree of toughness.

Hard Anodizing

HARD ANODIZING INCREASES THE THICKNESS of the natural oxide layer on the surface of metal parts. Anodic (anodized) films are stronger and more adherent than most types of metal plating, but also more brittle. This makes them less likely to crack and peel from aging and wear.

Heat Rejection

HEAT REJECTION IS DEFINED AS A QUANTIFIABLE measure of the rejection of waste heat from the engine into the atmosphere. Heat rejection is very similar to, but not synonymous with, heat dissipation or dispersion away from the engine into surrounding air. *Heat exchange* is another popular term. There are nuances to each, not readily apparent to the novice. The term *heat rejection* conveys a better description of the goal of a motorcycle oil cooler. And though heat rejection is often the goal of a heat exchanger, that's not always the case. The primary function of a car's heater core is to exchange heat from the heater core into the car's interior seating area where its benefits can offset the cold. On a Harley-Davidson, heat is rejected from the oil cooler into the atmosphere. Heat



One of the reasons Jagg oil coolers are so effective is because there are turbulators inside the tubing to eliminate laminar flow, which improves heat rejection.

dissipation has more of a subtle difference from rejection and describes more of an inactive dynamic, such as passive radiation from a heat sink.

High Silicon Wire

THIS ALLOY STEEL WIRE HAS SILICON (Si) added for highly stressed, high-rpm, anti-fatigue wear applications, such as performance internal combustion engine valve springs. Load loss pressure from constant compression and decompression in high heat applications is minimal.

Hobbing

HOBBING IS A MACHINING TECHNIQUE used to make gears, sprockets, and splines. A hobbing machine is a specialized milling machine, and the tool it uses is called a hob. A hob is a cutting tool that progressively cuts straight or helical teeth or splines in many successive small cuts. Like a lathe, if too big a cut is made, all kinds of bad and imprecise things happen, like chatter that will ruin the part being made. Hobbing is accurate and relatively inexpensive.

Kobe Alloy

JAPAN'S KOBE STEEL LTD. IS A LEADER IN steel development for some of the best valve springs produced. It developed a lightweight steel material by altering the percentage of silicon (Si) and chromium (Cr) added to the steel. Kobe also improved the technology that prevents the steel from becoming contaminated with substances that cause breakage. By increasing the durability of the steel by 10 percent, Kobe reduces the weight of the springs. Less weight in a valvetrain gains precision and allows for higher rpm use before mechanical breakdown. Many valve springs are based on oil-tempered wires of SAE 9254 steel, which has a tensile strength of about 1900MPa. Pa (Pascal) is a unit of force per unit area; an MPa is 1million Pascals. High-tensile strength Kobe steel (KHV7) has a tensile strength around 2050MPa. This steel has increased fatigue strength about 1.1 times higher than SAE 9254 steel. Moreover, performing a nitriding treatment increases the fatigue strength about 1.3 times higher. In the early 1990s, a new 2 percent silicon content super-high tensile

continued on page 134



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TRI-LINE STEREO TRIM



TRI-LINE SPEEDO & TACH ACCENTS

This Springer spans 75 years' worth of H-D style and tech





text by
tyler greenblatt

photos by
dino petrocelli

75th Daytona Bike Week Raffle Bike WIN IT!

THE 75TH RUNNING OF DAYTONA Bike Week is going down this month. As most *AIM* readers know, we get together with the Daytona Chamber of Commerce every year to build a custom raffle bike that helps fund much of the Chamber's annual activities. This year is no different, except for the major milestone reminding us that this rally has been going on for longer than most of its attendees have been alive.

It's also a great opportunity for us all to reflect on the past while also looking to the future. What better motorcycle to do both with than a Twin Cam-powered Softail Springer? It's got all the modern amenities that today's riders want, but with a classic style that only Harley-Davidson could pull off. But before we hand over the keys to the lucky winner, as you've already seen, we're actually stretching the bike a lot further in each direction to ensure it spans the full 75 years' worth of design and technology.

First off, as a 2008 model, it needed a little restorative love to bring it back to showroom-fresh condition. That's one of the reasons we were so excited to work with Woodstock Harley-Davidson in Kingston, New York. Many of the parts going on this bike are H-D originals, and who better to put the whole thing together than guys who do it every day? But the other reason is that Woodstock owner Bill Nugent is a Cannonball competitor and vintage Harley expert. He, along with our own Editor-In-Chief Buzz, came up with a whole new style for the Springer that, at first glance, looks like something that could've showed up for the very first Daytona Beach races in 1937.

As part of the "restoration," Woodstock H-D's Alex Litwinenko detailed and polished every single part of the original Softail that was reused. That includes the frame and powerplant, and before the bike came back together, everything was in showroom-fresh condition for the lucky new owner. And as it went back together, the team at Woodstock replaced many of the old parts with genuine Harley-Davidson products and a whole host of items from the P&A catalog. The Springer was given a new, sealed battery, new brake and clutch levers, and even a new front master cylinder. A new brake pedal rubber and inner fender splash guard were installed to replace those oftentimes uncleanable parts.

Raiding parts catalogs is always fun, and the build crew held nothing back when it came to both the H-D Parts & Accessories and Biker's Choice (BC) catalogs. Gracing the BC Hollywood handlebar is a set of white Vintage grips from H-D and braided throttle and brake lines from Magnum Shielding. Those cool round mirrors are from Biker's Choice. There's a new clutch cable, too, which is H-D stock. Biker's Choice also provided a new chrome kickstand and spring, voltage regulator, rubber shift peg, and a chrome upper belt cover. Lighting was improved on both ends, with a 1930s/40s-era Tombstone taillight on the back and a chrome H-D auxiliary lighting kit on the front, which adds a set of spotlights on either side of the new chrome H-D headlight. On the base of the front end is a cool vintage detail added to the classic Springer: teardrop rocker and end covers that cover the axle and articulating bracketry. A round, black engine guard was popped onto

the front and is a H-D accessory that hasn't changed much in 80 years!

While your eyes are in the vicinity, it's tough not to notice the killer Ride Wright Omega 40-spoke wheels. These polished wheels provide a vintage appeal, but with a present-day quality and style that is unmistakable. To further improve the style, the crew opted to use a set of Ride Wright's Mesh rotors and a matching pulley in the rear. These polished add-ons give the bike a unique glimmer that the original wouldn't have had and will certainly make onlookers do a double-take. The hot new wheel package rolls on some equally hot new rubber from Metzeler in the form of its new ME 888 series. Except for a project like this,



only wide whitewalls will do, and it's great that Metzeler offers an aggressive cruiser tire with that option. To keep the new wheels and tires clean, and to ensure smooth, confident stops every time, the Woodstock crew installed a set of dustless DP Brakes brake pads front and rear.

Making a new bike look old isn't always hard. But this project isn't about making it look old; it's about making it look timeless. Harleys today still follow the same design concepts as the original 1936 Knucklehead, so it was imperative to keep that tradition alive with this year's Daytona bike. To get the best of vintage style and modern comfort, the crew installed a Softail CrossBones sprung seat (still sold in the P&A catalog), which was covered in black

leather by Heather's Leathers. Heather's also added fringe, studs, and conchos, and then applied the same look to a set of its leather saddlebags. Truly a vintage appearance but with all the modern comfort today's riders are looking for.

In terms of performance, the 96" Twin Cam was left mostly alone, save for a set of dual exhaust pipes from Vance & Hines. The chrome headers run along both sides of the Springer, with the chrome mufflers dumping out on either side of the rear wheel. Not only does this setup give a classy appearance, but it's going to give the bike a nice growl, too! To achieve optimal engine running conditions, the build team also added a Dynojet PowerVision tuner. Not only will this smooth things out with the performance exhaust system, but it



**Truly a vintage appearance
but with all the modern
comfort today's riders are
looking for**

allows the lucky winner of this motorcycle the ability to install performance parts of his choosing and have an easy way of keeping the engine in tune throughout the process.

At first glance of this stunning custom Harley, the first thing that stands out is really the entire package and how it could have been something produced in Harley's York, Pennsylvania, plant. But when it comes to a custom motorcycle, it's not done until it has an amazing paint job to set it apart from all the rest! And that paint job comes courtesy of John Dills, of Dills Paintworks, based out of Cullowhee, North Carolina. John's been painting most of the restorations at Wheels Through Time museum in nearby Maggie Valley for the past decade, and knows exactly the way a vintage Harley should look. But he also does a lot of modern custom paint jobs as well and gave this Daytona Springer a unique blend of the two that furthers the bike's theme. John used PPG Deltron paints for the black basecoat, white gas tank sides, and covered the whole thing with PPG clearcoat. This is a bike that gets ridden to the show, and John's confident that the PPG paints will stand up to whatever the new owner can throw at it.

The other artist to lend his talents to this project is Mark Peters of Peters Auto Art, in Asheville, North Carolina. He's another of Dale Walksler's go-to guys, but his talents extend far beyond old bike



pinstripes. He painted the *American Iron Magazine* logos on either side of the oil tank as well as the 75th Daytona Bike Week logo on either side of the gas tank ... by hand! This painstaking process was well worth it in the end, and the difference between doing it by hand versus applying a decal is immediately obvious. The new owner of this Springer is going to have a beautiful piece of artwork.

That logo on the gas tank makes this Softail Springer a true one-off custom Harley-Davidson and a timeless collectible. Since this bike could go to anybody, it's always important to make sure that it has broad appeal. Many Harley owners love vintage bikes, but most don't want to deal with the associated "issues" that come with owning something so old. This retro Springer is without a doubt the best of both worlds; it has all the classic style that Harley people love, but with all the modern mechanical, electrical, comfort, and paint technology that today's riders have become accustomed to. A special thanks goes to the entire team at Woodstock Harley-Davidson, including Parts Manager Greg Platkin who was responsible for getting all the correct parts for the build. Of course, all the suppliers who provided parts for the bike are much appreciated by us, the Daytona Chamber who benefits from this raffle, and, naturally, the new owner. The best part about this bike? That new owner could be you! **AIM**

TECH SHEET •

Owner: Could be you!

Builder: Woodstock Harley-Davidson, Kingston, NY

Year/model: 2008 Softail Springer

Time to build: Four months

Detailer: Alex Litwinenko, Woodstock H-D

Painter: John Dills, Dills Paintworks, Cullowhee, NC

Logos painter: Mark Peters, Peters Auto Art, Asheville, NC

Colors: PPG Deltron black and white

POWERPLANT

Engine: 2008 Harley-Davidson Twin Cam 96

Builder: Harley-Davidson

Displacement: 96"

Cases: Stock

Flywheels: Stock

Connecting rods: Stock

Cams: Stock

Valves: Stock

Rockers: Stock

Lifters: Stock

Pushrods: Stock

Throttle body: Stock

Tuner: Dynojet PowerVision

Air cleaner: Harley-Davidson

Exhaust: Vance & Hines

Ignition: Stock

Regulator: Biker's Choice

Primary cover: Stock

Transmission: Stock six-speed

Clutch: Stock

Primary drive: Stock chain

Final drive: Stock belt, Ride Wright Mesh pulley

CHASSIS

Frame: 2008 Softail Springer

Front forks: Stock

Shocks: Stock

Front wheel: Ride Wright Omega 40-spoke 16"

Rear wheel: Ride Wright Omega 40-spoke 16"

Front brake: Stock caliper, Ride Wright Mesh rotor, DP pads

Rear brake: Stock caliper, Ride Wright Mesh rotor, DP pads

Front tire: Metzeler ME 888 Wide Whitewall 130/90-16"

Rear tire: Metzeler ME 888 Wide Whitewall 150/80-16"

Front fender: Stock

Rear fender: Stock

ACCESSORIES

Headlight: Harley-Davidson

Taillight: Harley-Davidson

Spotlights: Harley-Davidson

Fuel tank: Stock

Handlebars: Biker's Choice

Seat: Harley-Davidson, covered by Heather's Leathers

Saddlebags: Heather's Leathers

Engine guard: Harley-Davidson

Speedo: Stock

Dash: Harley-Davidson

Throttle cables: Magnum Shielding

Brake lines: Magnum Shielding

Grips: Harley-Davidson

Mirrors: Biker's Choice

Hand controls: Harley-Davidson



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2016 H-D **FLSTN** **Softail** **Deluxe**

It's a bling thing

ONE THING'S FOR SURE ABOUT THE FLSTN Softail Deluxe: It isn't subtle. Chromed and polished parts abound on this boulevard bomber, and when you factor in the wide whitewall tires and optional Hard Candy paint job, — our test bike wears the flamboyant Gold Flake option — you roll up on nothing short of an eye-catching custom cruiser. This bike's styling hits you like a jackhammer. Indeed, our bike never went unnoticed when I pulled into parking lots or gas stations. Eyes stared, curious minds inquired, and wannabe Harley riders cast coveting glances at the gold FLSTN. The Softail Deluxe is that kind of bike.

It had been two years since we last rode a Softail Deluxe (issue #312), so it was time for another visit. There have been some notable changes to the FLSTN during the past 730 days. Foremost, the 2016 model checks in with electronic cruise control, and the High Output Twin Cam 103 engine package as standard features. A new force-feed air filter cover, emblazoned with 103 High Output script and capped with a cool stainless steel wire-mesh screen over the mouth, replaces the ham-can inspired cover found on the





2014 bike, and twirling inside the right-side cam chest cavity are a pair of sticks with more aggressive lobes to bump peak torque from 97.4 ft-lbs. (at 3000 rpm) to 100.3 ft-lbs. (also at 3000 rpm). Although there's little, if any, noticeable difference in the seat-of-the-pants feel from the 2014 model, Harley tells us that the High Output engine's new cam timing, assisted by the new air cleaner, makes it more agreeable when teamed with a free-flow exhaust, such as those from Harley's Screamin' Eagle arsenal or other quality aftermarket systems. The logic behind this is simple; since Harley owners typically upgrade their bikes' exhaust systems anyway, why not give the masses what they want in the first place? And that's a cam grind that remains EPA-legal yet delivers the goods in terms of snappy acceleration, the motivating factor behind installing a free-flow exhaust system in the first place.

The High Output engine's performance seems most advantageous in the upper rpm range, where the engine wants to breathe more freely. Comparing roll-on acceleration times with the 2014 model, the High Output 103 scooted us from 60-80 mph in fifth gear slightly quicker,

doing so in 4.3 seconds compared to our 4.4 time in 2014. Not a tremendous difference, but logic says that if you include a quality exhaust system in the mix, that time will be even better.

Harley touts 42 mpg for the High Output engine, same figure boasted by the 2014 model with the "standard" TC 103". And that fuel consumption figure is about right, as I constantly achieved 40 or so mpg from our 2016 FLSTN. Factor in the fuel tank's 5-gallon capacity, and you have a riding range of about 200 miles.

As you might guess, the solid-mount 103" Beta engine retains its internal counterbalance configuration which produces minimal vibration at any speed. Click the Cruise Drive transmission into sixth gear, and you're rewarded with a smooth ride all the way to your destination.

And when you're on the open road, give your right hand a rest by clicking on the electronic cruise control. This is a new feature on most Softail models, and operation is quick and





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easy. Press the button with your left thumb to initiate cruise mode, and when you settle on a desired pace, give the button a gentle tap downward to set the speed. Then settle into the Softail Deluxe's soft saddle to enjoy the ride. You can accelerate or decelerate as needed by pressing the switch up or down, or just let the engine hum smoothly along as you point toward the horizon. You can bypass the cruise control by tapping the brakes or pressing the left-hand button again, same as you did to set it in motion.

Throughout, the Deluxe's ride remains smooth and purposeful. There's 5.1" of travel in the glide fork's fat legs and 3.4" of rear wheel travel to soak up major bumps in the road. The 16" balloon tires' (MT90 front, MU85 rear) tall sidewalls help to further isolate you from surface irregularities.

The rider's triangle is rather accommodating, too — if you prefer low seat height and easy-to-reach handgrips. In short, the FLSTN forms a compact station behind the stainless steel beach-bend handlebar. I stand 5' 8" and can easily flatfoot it at stops aboard the Softail Deluxe. If anything, though, the riding position is too cramped for me. A set of stand-up handlebar risers and a slightly higher aftermarket seat could easily remedy that, but for people with shorter in-

seams, the FLSTN offers a fine ergonomic fit in stock configuration.

On the other hand, there's plenty of room to place your feet when you set off on a ride. Those stylishly sculpted banana boards are more than 13" long (that's more than a foot, pun intended), so you should easily find a position on them that's comfortable for you.

Another update given to the FLSTN since we last tested it in 2014 includes a slight refinement to the brakes. While ABS remains a standard feature, last year the Deluxe's brake system received a new master cylinder and front caliper to reduce squeeze pressure to the hand lever. That, along with a slightly larger 300mm front rotor, translates to reduced lever pressure, especially during panic stops. Hauling the 701-pound bike to a stop from an indicated 30 mph requires only about 35', and

it does so with minimal fanfare, thanks to the ABS.

While the Deluxe is at a full stop, lower its chromed side-stand so you can remove yourself from the 24.5"-high seat to step back and admire the bike one more time. Because stylish looks, above all else, is what this bike is about.

You'll notice a few styling changes, too. Foremost, the front fender's "Deluxe" medallion has been changed since



TECH SHEET • 2016 H-D FLSTN Softail Deluxe

| | |
|--------------------------|---|
| Length: | 94.9" (2410mm) |
| Seat height: | 26.4" (670mm), unladen |
| Ground clearance: | 4.3" (110mm) |
| Rake: | 32.1 degrees |
| Trail: | 5.8" (147mm) |
| Wheelbase: | 64.4" (1635mm) |
| Engine: | Air-cooled, High Output Twin Cam 103B (1690cc), solid-mounted, counter balanced, black powdercoated, chrome covers, Automatic Compression Release, new air cleaner cover/High Output 103 badge; Engine Idle Temperature Management option |
| Compression: | 9.6:1 |
| Fuel system: | ESPI, heated O ₂ sensors |
| Transmission: | Six-speed Cruise Drive |
| Front tire: | Dunlop Harley-Davidson MT90-16" |
| Rear tire: | Dunlop Harley-Davidson MU85-16" |
| Fuel capacity: | 5.0 gallons (18.9L) |
| Oil capacity: | 3.5 quarts (3.3L) |
| Shipped weight: | 701 pounds (318kg) |
| GVWR: | 1,160 pounds (526kg) |
| Front brake: | ABS, four-piston caliper; 11.80" x 0.20" solid, uniform expansion rotor (300mm) |

Rear brake: ABS, two-piston caliper; 11.50" x 0.23" solid, uniform expansion rotor (292mm)

Exhaust system: Chrome, straight over/under shotgun with dual tapered mufflers

Front forks: 41.3mm, telescopic, "beer can" covers

Rear shocks: Hardtail styling, hidden, coil-over

Front wheel: Steel laced; 3.00-16"; optional chrome aluminum profile laced

Rear wheel: Steel laced; 3.00-16"; optional chrome aluminum profile laced

Handlebars: Stainless steel, low rise, easy-reach chrome pullback riser, electronic throttle control, cruise control

Colors: All: "Hologram effect" tank and fender medallions, black paint fill; Vivid Black/medium silver pinstriping; Superior Blue/blue and medium silver pinstriping; Mysterious Red Sunglo/Velocity Red Sunglo, medium red and Pale Gold pinstriping; Crushed Ice Pearl/Frosted Teal Pearl, gray and Teal pinstriping; Custom colors: Purple Fire/Blackberry Smoke, Proper Purple and Charcoal Metallic pinstriping; Cosmic Blue Pearl; Hard Candy Custom: Hard Candy Gold Flake

MSRP: \$18,549-\$19,749

A close-up, low-angle shot of motorcycle wheels. In the foreground, a front wheel with a red fender is visible, showing its spokes and the ground. Behind it, a rear wheel with a black tire and a red rim is partially visible. The background is dark and out of focus.

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NEW BIKE REVIEW

2014, as it now has a hologram effect with black inserts. Also for 2016 are five color options and, depending on which you select, the bike's MSRP fluctuates from the base \$18,549 for Vivid Black or blue, to \$19,749 for the Hard Candy Gold Flake that's on the test bike. It's bike's paint job is more than just a quick coat of gold metallflake paint, though. The graphics on the front fender and the fuel tank's sides give it a deeper, richer appearance, almost as if this were a one-off custom paint job. That's the nice part about the Hard Candy Custom paint option, too. For a minimal price — \$1,200 in this case — you get a full-on custom paint job, without the hassle of having to remove the tins from the bike and paying cash up front for it. You can bury the cost in your bike's monthly payments, while you enjoy the benefits of owning a bike that otherwise looks as if it were customized by you. And that subtlety won't be lost on people who spot your bike in the parking lot during the next bike night or rally.



Nostalgic styling, bright candy colors and more chrome than a 1959 Cadillac. That's the FLSTN Softail Deluxe. It's not everybody's choice for a motorcycle; but then again, isn't that why we have chocolate and vanilla ice cream? **AIM**

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This fat-tire custom Dyna is on fire!

Well, not really, but if it were, owner Richard King would certainly know how to douse the flames. Richard is a 34-year veteran of the Yukon Fire Department in Yukon, Oklahoma, but simultaneously builds some pretty trick motorcycles at his King's Customs operation. He started his bike building enterprise in a small 900-sq-ft storage unit some years ago. Eventually, though, it outgrew several subsequent locations so that, today, it's pretty much evolved into a one-stop shop that provides everything from standard Harley-Davidson service and repair to paint and airbrush work, fabrication, and powdercoating.

Still, Richard points out that his operation is tiny when compared to many other shops. King's Customs builds bikes one at a time, and that also takes time (maybe more time than the bike building TV shows of old led you to believe). Richard adds, "Trust me, a custom bike doesn't get built in

seven days! We do the very best we can but take our time to make it right."

But what Richard does like to do is to build bikes that also serve as prototypes for future custom parts. In the car business, prototype machines are regularly called "mules." And that's the case with some of King's Customs bikes. Mule or not, that brings us to this fat-tire Dyna, our feature bike.

As the story goes, Richard came across this motorcycle by way of an acquaintance. A member of a friend's family had owned the bike (then a bone-stock Dyna Fat Bob). In the course of riding it, the owner experienced a fatal heart attack. Rider and bike went down, and the broken Dyna became part of an estate. Richard purchased the Dyna and hauled it back to his shop where it sat (damaged) in a corner. It remained, essentially, one of those "out of sight, out of mind" bikes, but one day, Richard went to the local store, and when he received change from his purchase, one of the coins was a shiny new penny. A light bulb went off. That shiny new penny was just the inspiration Richard needed to get started on his fatter-than-fat Fat



Bob project. He'd build a bike that was trimmed (and as shiny) as a freshly minted penny.

Richard has always been a fan of the fat-tire look, popularized by Russell Mitchell's Exile Cycles operation. Those bikes, along with that shiny new penny, were the ultimate stimulus for this build. Like Russell's machines, Richard's Fat Bob was going to become fatter than fat, at least from the rolling stock point of

view. As you might have guessed, Richard tore the damaged Dyna completely apart before tossing out anything that was bent. At the same time, he ditched the front end, and in its place went a Mid-USA springer. It's obvious that the springer setup just clears the honking 180/70-15" Metzeler front tire. Out back, the swingarm was modified to accept the broad King's Customs fender, along with an identically sized fat-by-large Metzeler tire. The wheels, front and rear, are actually Harley-Davidson laced hoops. The brakes consist of a single four-piston Demon's Cycle caliper on the nose and a four-piston Arlen Ness unit on the rear. Up top, the handlebar is a traditional crossbar-equipped Hollywood job from Paughco. The hand controls are GMA bits, and



there's a lone underslung bar-mounted mirror on the left side. The headlight is a Roland Sands Design piece while the combination taillight/license bracket comes from the Mother Road Customs (MRC) shelves. Another item from MRC is the seat, a vintage coil-sprung saddle that's fitted with copper rivets. As it turns out, these seats not only look vintage, but act the part: the spring configuration functions by buffering road and powerplant vibrations from the rider.

Speaking of good vibrations:

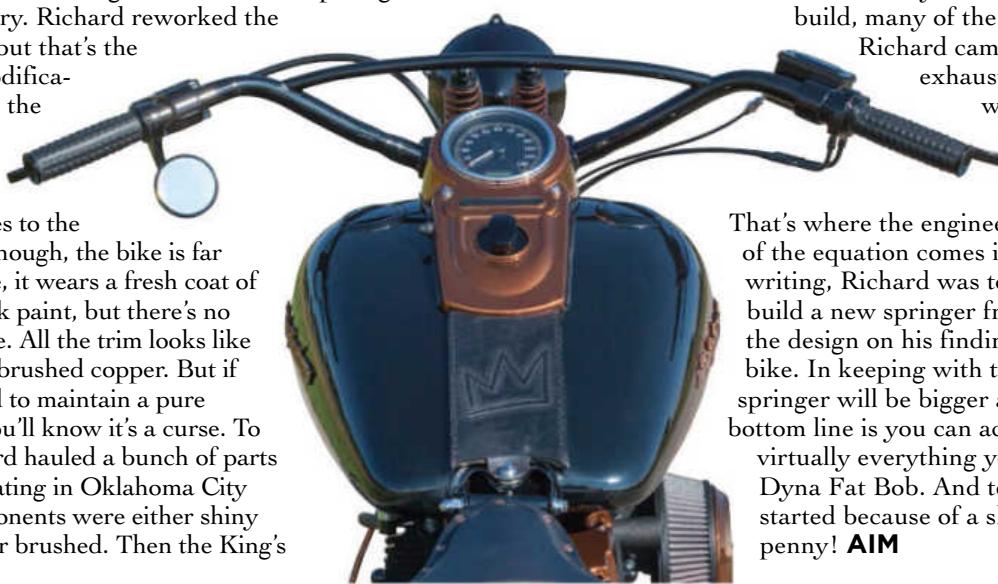
that Big Twin nestled within the frame rails is a bona fide rocket of an engine. Richard tore the Twin Cam apart, and with the help of local Harley-Davidson wizard Howard Wiggins, the original 96" Big Twin was completely blueprinted and balanced. That proved to be a methodical job, based primarily on stock parts that were matched with a new Wood 777 camshaft package (.525"-lift) and, of course, a boost in displacement to 103" by



way of select Screamin' Eagle parts. Basically, Howard had his hands on pretty much everything inside the engine (and it shows on the dyno pull). On the outside, two changes include a Screamin' Eagle air cleaner and, of course, those wicked 2-into-1 pipes. That big-tube exhaust with the short-can muffler is an in-house product from King's Customs. On the dyno, the extra work on the Big Twin really shows up. It cranks out 105 hp at the rear wheel, and the torque curve is about as flat as Kansas.

Backing up the 103" engine is a stock six-speed gearbox and stock primary. Richard reworked the clutch, though, but that's the extent of the modifications. Out back, the final belt drive remains stock, too.

When it comes to the Dyna's details, though, the bike is far from stock. Sure, it wears a fresh coat of basic Vivid Black paint, but there's no apparent chrome. All the trim looks like polished and/or brushed copper. But if you've ever tried to maintain a pure copper finish, you'll know it's a curse. To get there, Richard hauled a bunch of parts over to Ray's Plating in Oklahoma City where the components were either shiny chrome-plated or brushed. Then the King's



Customs fix was straightforward and to the point: they sprayed the wide range of chrome-plated and brushed-finish parts with translucent copper. The result is absolutely stunning, particularly in broad daylight. It's also a whole lot more durable than bare copper.

After the bike was reassembled, Richard checked it out and called it done. It hasn't been ridden very much, but it has been used as a corporate calling card to gather more business for King's Customs.

But that's not the end of our story. You see, during the build, many of the bits and pieces

Richard came up with (the exhaust, for example) were used as prototypes for a line of in-house parts.

That's where the engineering mule part of the equation comes in. And as of this writing, Richard was tooling up to build a new springer front end, basing the design on his findings with this bike. In keeping with the fat theme, his springer will be bigger and beefier. The bottom line is you can actually buy virtually everything you see on this Dyna Fat Bob. And to think it all started because of a shiny new copper penny! **AIM**

TECH SHEET •

Owner: Richard King, King's Customs, Yukon, OK
Builder: King's Customs

Year/model: 2009 Harley-Davidson Dyna Fat Bob

Cost to build: \$15,000

Time to build: Three months

Chromer: Ray's Plating, Oklahoma City, OK

Powdercoater: Powder Man Powder Coating, Oklahoma City, OK

Painter: King's Customs

Colors: Vivid Black and translucent copper

POWERPLANT

Engine: 2009 Harley-Davidson Twin Cam 96

Builders: Howard Wiggins and King's Customs

Displacement: 103"

Horsepower: 105

Cases: Stock

Flywheels: Stock

Balancing: Howard Wiggins

Connecting rods: Stock

Cylinders: Screamin' Eagle 103" big-bore kit

Pistons: Screamin' Eagle 10:1

Heads: Howard Wiggins

Cams: Wood Performance 777 (.575"-lift, intake and exhaust)

Valves: Howard Wiggins

Rockers: Howard Wiggins

Lifters: Howard Wiggins

Pushrods: Howard Wiggins

Carb: EFI

Air cleaner: Screamin' Eagle

Exhaust: King's Customs

Wires: Screamin' Eagle Phat 10mm

Charging system: Stock

Transmission: Stock

Case: Stock

Gears: Stock

Clutch: Stock, modified

Primary drive: Stock chain

Final drive: Stock belt

CHASSIS

Frame: Harley-Davidson Dyna

Front forks: Mid-USA

Swingarm: Stock, modified for rear fender

Front wheel: Harley-Davidson laced 15"

Rear wheel: Harley-Davidson laced 15"

Front brake: Demon's Cycle four-piston caliper

Rear brake: Arlen Ness four-piston caliper

Front tire: Metzeler 180/70-15"

Rear tire: Metzeler 180/70-15"

Rear fender: King's Customs

Fender struts: King's Customs

ACCESSORIES

Headlight: Roland Sands Design

Taillight: Mother Road Customs

Handlebars: Paughco Hollywood

Seat: Mother Road Customs

Pegs: Joker Machine/ King's Customs

Dash: King's Customs, modified

License bracket: Mother Road Customs

Mirrors: Todd's Cycle

Hand controls: GMA

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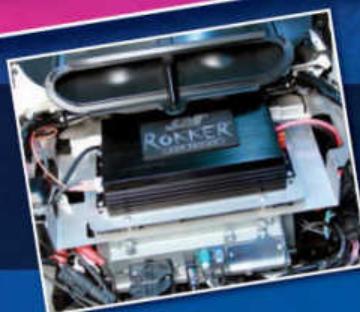


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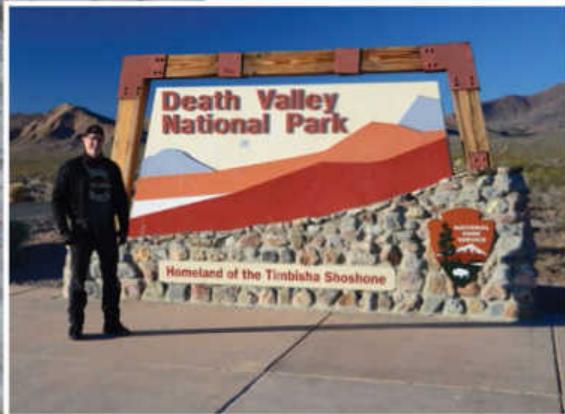


Ghosts of the Open Road

Riding the lonely highways of Nevada and Death Valley



There's borax in them thar hills, and 20-mule teams hauled wagon-loads of the mineral from the mines in Death Valley during the late 1800s. Right: Motojournalist Glen Abbott BDV (Before Death Valley).



RIDING DOWN, DOWN, DOWN INTO THE Valley of Death, the temperature climbed as the elevation dropped. Snow-white borax flats shimmered like a mirage in the distant valley below. The roar of the Harley's engine and the rush of the wind filled my sun-baked senses as I slipped into the Zen-like state of tranquility that long riders live for. Floating in that sea of tranquility, I sped deep into the belly of one of the most beautiful, yet God-forsaken, places on earth.

Fittingly, the adventure began in Sin City, better known as Las Vegas, Nevada. It's a city that even legendary gonzo journalist Hunter S. Thompson found unnerving. "No, this is not a good town for psychedelic drugs," he wrote in his 1972 masterpiece, *Fear and Loathing in Las Vegas*. "Reality itself is too twisted."

In Vegas today, things are the same, only different. Newer casinos sprout like money-hungry monsters from the imploded remains of old ones, and LEDs have replaced neon as the illumination source on many of the garish marquees. But bits and pieces of the old Vegas remain, if you know where to look. Places like the Mob Museum, which fully embraces the city's sordid criminal past; the Neon Museum, whose boneyard is haunted by the ghosts of vintage casino signs; or the Atomic Testing Museum, which attempts to explain why the federal government thought it might be a good idea to detonate nuclear weapons in the remote Nevada desert, are certainly worth the time to visit.

Even after countless nuclear blasts — both in the atmosphere and underground — apparitions still lurk among the sagebrush

and yucca of that remote desert. Indeed, traveling the state's lonely highways you may sense the spirits of the long-dead prospectors, dreamers, and con men who lived and died in pursuit of the gold and silver riches that the land had to offer. Or maybe you'll find space aliens and their crashed flying saucers. You just have to believe.

A visit to the Techatticup Mine in El Dorado Canyon, an hour south of Vegas, set the stage for my trip. Established in 1861, the Techatticup Mine was once among the most productive gold mines in the region, a rough and tumble outpost where life expectancy was short because murders and mining accidents were commonplace. Today the rusting hulks of ancient cars, trucks, and mining equipment litter the windswept canyon, and for \$12.50, you can take a guided tour of the mine's claustrophobic, dimly lit tunnels.



Blasting and breaking into the mountain's hard rock using dynamite and hand tools, early miners lived perilous lives.

Next morning, my riding buddy, Elliot Gillies, and I headed for the high desert of northeast Nevada on a pair of 2016 Harley-Davidson Ultra Limited touring bikes that we rented from Las Vegas H-D. Our first night's destination was the historic town of Ely, which sits on the edge of US 50, a highway known as the "Loneliest Road in America." Riding north on US 95 — the Great Basin Highway — the morning sun brought the multihued layers of the Meadow Valley Mountains to life. A hundred miles south of Ely, we stopped in Pioche, an 1860s mining town whose sleepy appearance belies its violent past. We walked through the town's Boot Hill cemetery where it's said the first 72 bodies buried there were gunshot victims, laid to rest long before anyone arrived due to natural causes.

In Ely, we checked into the historic Hotel Nevada. Constructed in 1929, the six-story hotel/casino was, for a time, the tallest building in Nevada. Over the years it hosted a number of Hollywood celebrities, for whom some of the rooms have been named.

The next morning we toured the Nevada Northern Railway, built to haul ore after copper was discovered in 1906. "The rail yard here is over 56 acres, with over 70 of the original buildings and structures," explained Mark Bassett, the railroad's executive director. A National Historic Landmark, the facility has preserved many of its original steam and diesel locomotives and rolling stock; train rides and special events are offered throughout the year. It's the largest, most complete historical railway in the country, whose pristine condition Bassett attributes to the site's isolation.

"Ely is the most remote incorporated city in the continental

Left, top: Corkscrew Peak, Death Valley, California. **Left, bottom:** A couple of road-weary travelers in Goldfield, Nevada. **Right, top:** The desert slowly reclaims a vintage automobile. **Right, bottom:** Looking into the bowels of the Techatticup Gold Mine.



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United States," he said. "We're 240 miles from the saints in Salt Lake City, or 240 miles from the sinners in Vegas. You get to choose which way you want to go!" Touché.

The sign near the beginning of the Extraterrestrial Highway — State Road 375 — reads "No Gas Next 150 Miles." There are also warnings about low flying aircraft and free-range cows (actually the cow advisories read "Open Range"). This is among the loneliest of lonely roads — exactly my kind of place. A few miles in, we pulled off the pavement, shut off the bikes, and were immediately enveloped by an unaccustomed sound. "Hear that?" asked Elliot. "Complete and utter silence!"

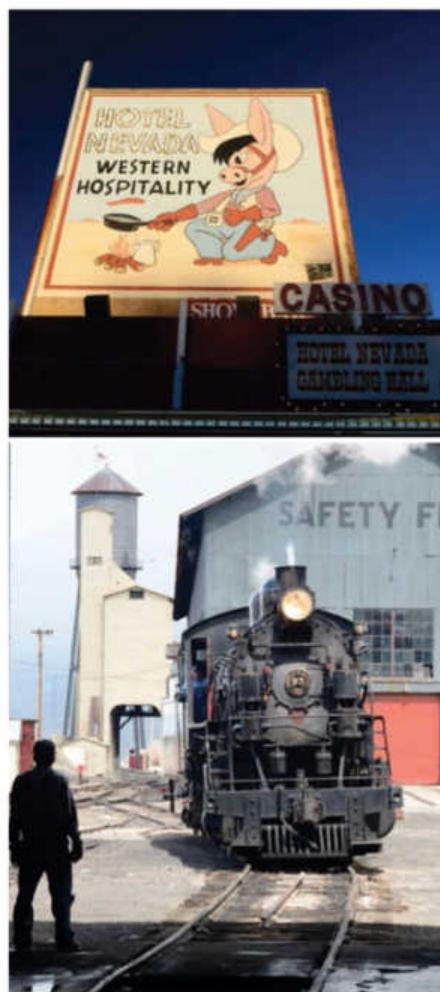
The Extraterrestrial Highway runs for about 100 miles through the middle of nowhere. The road borders the Nevada Test Site. Although you can't see it, this is where the government tested nuclear weapons, and the site is home to Area 51, a top-secret place about which rumors and conspiracy theories abound. Alien beings? Spaceships? Stealth cattle experiments? Inquiring minds want to know, but precious few answers are forthcoming.

We arrived in the tiny settlement of Rachel — officially the *middle* of the middle of nowhere — and stopped for a burger at the Little A'Le'Inn, a combination bar, restaurant, and gift shop dedicated to all things alien ("alien" as in outer space). A conversation with longtime proprietor Pat Travis

reveals she's no stranger to extraterrestrials herself. "I've met three of them," she told me. "I really believe they're here, and they walk among us."

From the Extraterrestrial Highway, we headed west on US 6 into Tonopah, called "The Queen of the Silver Camps" after silver was discovered there in 1900. The town boomed through the 1920s, boasting five daily newspapers, 30 saloons, and the high-end Mizpah Hotel. Today the Mizpah, after extensive renovation in 2011, again welcomes visitors. It's also reportedly haunted by a "Lady in Red," a friendly spirit, according to the hotel's web site. Additional research, however, reveals the Lady in Red was likely either a prostitute who met an untimely death there, or a wife killed by her jealous husband, so I can't imagine she'd have much to be happy about.

Thirty minutes south of Tonopah, the town of Goldfield went through a similar boom-and-bust cycle. The discovery of gold there in 1902 made it the largest city in Nevada, home to 20,000 residents by 1906. Today Goldfield has fewer than 200 residents, but it's making a comeback. Goldfield's historic, and reportedly haunted, high school is undergoing renovation, and a number of gift and antique shops cater to the tourist trade. Absent from the renovation boom is the shuttered Goldfield Hotel, said to be the finest hotel between Chicago and San Francisco when it opened in 1908, now long-closed and supposedly haunted. "Goldfield is quite active [with spirits]; the old hotel is active," explained Lisa Pappalardo, treasurer of the Goldfield



Left: Ely's Hotel
Nevada was the tallest building in the state when it opened in 1929. Right: Keep your eyes peeled for UFOs on Nevada State Road 375, the Extraterrestrial Highway.



Left: Steam engine 93
hauled copper ore at
Nevada Northern RR in
Ely, now a National
Historic Landmark.
Right: Goldfield,
Nevada, was a gold-
mining boomtown in
the early 20th century.
Today, not so much.





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Historical Society. "I was walking to work one day, and a gentleman crossed the road in front of me. A stumbling drunk cowboy. He had his hat in his hand, and he stumbled diagonally across the road and went right through the doors of the Nixon building." That is, she added in so many words, he floated through the closed doors of the building.

Later, we explored the ghost town of Rhyolite, a few miles outside the town of Beatty, near the California border. The discovery of gold there in 1905 led to the town's formation, but the financial panic of 1907 began its slow demise, the lights being extinguished in 1916 when the power company literally shut off the electricity.

Up close, the gleaming white borax flats of Death Valley look like they're covered with a dusting of snow, but here in the hottest place on earth, snow isn't generally in the forecast. More than a century ago, 20-mule teams hauled huge wagons loaded with the mineral from Harmony Borax Works near Furnace Creek to the rail lines in Mojave, California, 165 miles away. Elliot and I stopped for a look at the ruins of the borax plant before continuing on to Badwater Basin a half hour away. At 282 feet below sea level, the basin is the lowest point in North America, and if you look closely at the rocky cliffs opposite the parking lot, you'll notice a "Sea Level" marker high above.

Several miles outside the national park, we pulled into the gravel parking lot of the Amargosa Opera House and Hotel. Situated at the dusty intersection of California state roads 190 and 127 in the tiny community of Death Valley Junc-

continued on page 141



Left: New York dancer Marta Becket opened the Amargosa Opera House in Death Valley Junction in 1967. **Below:** Becket herself decorated the interior with hand-painted murals.



Top: From Badwater Basin in Death Valley, you must look up — way up — to sea level. **Left:** A sign marks the spot of the lowest point in North America.

SOURCES

AMARGOSA OPERA HOUSE AND HOTEL
Amargosa-Opera-House.com

HOTEL NEVADA
HotelNevada.com

LAS VEGAS HARLEY-DAVIDSON
LasVegasHarleyDavidson.com

LITTLE A'LE'INN
LittleAleInn.com

MIZPAH HOTEL
MizpahHotel.net

MOB MUSEUM
TheMobMuseum.org

NATIONAL ATOMIC TESTING MUSEUM
NationalAtomicTestingMuseum.org

NEON MUSEUM
NeonMuseum.org

NEVADA NORTHERN RAILWAY
NNRY.com

TECHATTICUP MINE
ElDoradoCanyonMineTours.com



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WHEN AUGUST GONZALEZ FIRST WALKED into Headcase Kustom Art shop, he spotted a cool little custom bike that owner Casey Johnson had built. It was a stunning machine, but August didn't buy it. Now, August isn't exactly small of stature, and the bike wasn't his size, which affected the deal. Simply, the diminutive bike staring back at him was *too* small. One thing led to another, and instead of buying the bike that was on the floor, August elected to have Casey build him a one-off special that would fit him better.

First things first: Casey and August agreed that the new bike would be street-legal, yet exhibit a flat track racer's vibe. With that in mind, Casey turned to Craigslist, where he located a nice 1983 Sportster. The Ironhead's 1000cc engine had recently been gone through, and according to Casey, the machine ran well. That meant no cost- or time-consuming rebuilding, leaving wiggle room in the budget for the custom mods they had in mind.

Once in his paint shop (that's what Headcase Kustoms is all about — specialized trick paint full custom bike projects such as this are a bit of a sideline), Casey completely stripped down the old Sporty. He then stretched both the frame and swingarm 3" to better accommodate August's towering stature. Casey's pal Mikey at Mikey Fab in nearby Ontario, California, performed the actual welding when putting the frame tubing back in place.

Casey also lowered the bike 3" using Progressive Suspension's 412 rear shocks. Up front, the stock fork was tossed in exchange for a Wide Glide item. On the topside, Casey had Mikey Fab bend a set of low buckhorn-style handlebars that now include a set of Joker Machine controls and hand levers. The bar-end mirror is right out of the Todd's Cycle catalog, and the headlight is a Cycle Standard from Lowbrow Customs.

The footpegs are actually Suzuki GSX-R pieces, matched to a set of stock Harley foot controls. Seems like more and more footpegs from rice burners are finding their way onto custom V-twin builds these days.

The bike came with a set of Firestones, so Casey elected

to keep the rear MT-90-16" skin, but favored a new tire for the front. The wheels are stock Harley-Davidson laced parts, but as you can see, the rims have been powdercoated. The brakes are early-era single-piston caliper Harley-Davidson jobs.

Even though Casey and August's game plan was to build an extra-large XL, Casey split the gas tank to narrow it. Look closely and you can see that the oil bag is actually an upside-down mini-peanut gas tank. Inside, it gets a bit more complicated: the battery is mounted in there (upside-down, by the way), and the external oil lines confirm that the oil is



also contained within. To keep with the theme, Casey fabricated a custom seat, complete with a tank-matching fairing. The upholstery was capably handled by local trim shop Rogelio's Auto Upholstery in Baldwin Park, California.

As far as the mill is concerned, it's pretty much stock. The carb is an S&S Super E equipped with a Bison Motorsports velocity stack air screen, and the exhaust is based on an old EMPI Volkswagen stinger pipe hooked to a set of custom pipes by Mikey Fab. Casey added the heat wrap once it was finished. The rest of the engine, including the unit-drive transmission, was carefully detailed and reassembled.



The bike's electrical components are a nod to nostalgia. Most of the electrical components consist of Cycle Electric bits, and for a final touch, the plug wires are vintage-looking cloth-wrapped sections from Lowbrow Customs' inventory.

After the chassis fabrication work was completed, Casey disassembled everything for the final round of paint. One thing he notes that's important is the use of powdercoating (coming from a guy who paints for a living, this is interesting). Casey has a local powdercoater, Pacific Coast Powder Coating in Palmdale, California, do all of his work. What Pacific Coast does is actually custom-mold things like frames before powdercoating them. Impossible? Not according to the folks at Pacific Coast. In fact, they offer this service on a regular basis, and local custom bike builders and hot rodders have been gobbling it up. Casey notes that while his operation is fully capable of handling the molding and painting, it's just more cost effective and time efficient to have the Pacific Coast guys handle it. Needless to say, a bunch of pieces on August's bike were powdercoated. The rest of the sheet

metal, however, was painted by Casey. The result is a brilliant mix of Kustom Shop Lime Green Candy coupled with House of Kolor black and Silver Leaf that's highlighted with green pinstriping.

After the paint was buffed, Casey reassembled the bike and carefully shook it down before handing the keys to

August, who now rides and shows it. And it knocks the competition out of the show ring. In fact, at the Progressive International Motorcycle Show (IMS) last year in Long Beach, California, the bike received J&P Cycles' prestigious Ultimate Builder

Award for Retro Mod machines. That's an accomplishment! But August's new-old Ironhead continues to knock them out cold with win after win at local shows. What knocks us out is the fact that this was actually a budget build. Proof again how, with careful mods and an equally careful way of selecting parts, a custom bike can look so good. Wrap it up with over-the-top paint, and you can see for yourself that wretched excess isn't always the final answer for bringing home the show gold. **AIM**



TECH SHEET •

Owner: August Gonzalez
Builders: Casey Johnson, Headcase Kustom Art, Irwindale, CA; Mikey Fab, Ontario, CA
Year/model: 1983 Harley-Davidson XL 1000
Time to build: One year
Powdercoater: Pacific Coast Powder Coating, Palmdale, CA
Painter: Headcase Kustom Art
Colors: Kustom Shop Lime Green Candy; House of Kolor black, Silver Leaf, and green pinstriping

POWERPLANT

Engine: 1983 Harley-Davidson XL 1000
Builders: Headcase Kustom Art/Mikey Fab
Displacement: 1000cc
Cases: Stock
Flywheels: Stock
Connecting rods: Stock
Cylinders: Stock
Pistons: Stock
Heads: Stock
Cams: Stock
Carb: S&S Cycle Super E
Air cleaner: Bison Motorsports

Exhaust: EMPI Volkswagen Stinger/Headcase Kustom Art/Mikey Fab

Ignition: Stock

Wires: Lowbrow Customs cloth wire

Charging system: Cycle Electric

Regulator: Cycle Electric

Transmission: Stock

Case: Stock

Gears: Stock

Clutch: Stock
Primary drive: Stock

CHASSIS

Frame: 1983 Harley-Davidson XL
Rake: Stock
Stretch: Stock
Front forks: Harley-Davidson Wide Glide Shovelhead
Mods: Progressive Suspension lowering kit and 412 rear shocks
Swingarm: Stock, stretched 3"
Front wheel: Harley-Davidson 21"
Rear wheel: Harley-Davidson 16"
Front brake: Stock single-piston caliper
Rear brake: Stock single-piston caliper
Front tire: Firestone 21"
Rear tire: Firestone MT90-16"
Rear fender: Headcase Kustom Art tail section

ACCESSORIES

Headlight: Lowbrow Customs Cycle Standard
Taillight: Middle Classy 4 Speed Division
Fuel tank: Harley-Davidson XL, modified
Oil tank: Peanut tank, modified
Handlebars: Headcase Kustom Art/Mikey Fab
Seat: Rogelio's Auto Upholstery, Baldwin Park, CA
Pegs: Suzuki GSX-R
License bracket: Middle Classy 4 Speed Division
Mirrors: Todd's Cycle
Hand controls: Joker Machine
Foot controls: Harley-Davidson
Levers: Joker Machine

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1 Here's our 2014 Indian Chieftain up on Rob's dyno ready to get its new chrome Vance & Hines Turndown mufflers. Rob will remove both side covers and saddlebags before starting the upgrade.

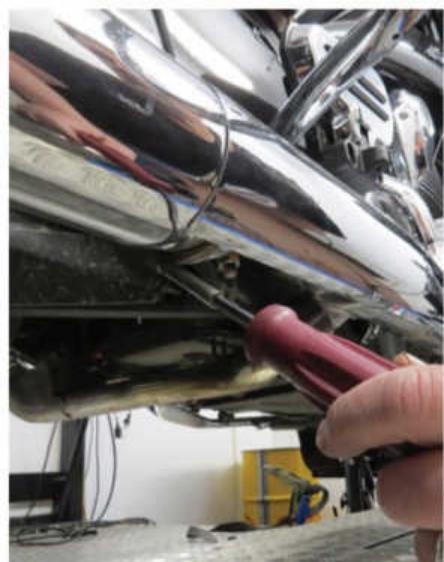
SO YOU'VE TREATED YOURSELF TO A NEW INDIAN. You're no doubt already impressed with the comfortable ride and the massive amount of torque only made better by the near instantaneous throttle response. The 111" Thunder Stroke V-twin emits a mean growl through its dual exhaust system that exits underneath each saddlebag. However, like any stock motorcycle, you definitely don't get to enjoy the sound of the exhaust as much as you'd like. Whether you have the radio on, or a full-face helmet, or you're on a noisy highway, or all three, a factory exhaust system only lets you enjoy your bike so much.

Our 2014 Indian Chieftain sounds incredible when you get on the throttle but as with most OEM motorcycles, it can be made a lot better. That's why we turned to Vance & Hines to try out a set of its Turndown slip-ons

(#18531/\$649.95). These chrome mufflers fit in perfectly with the stylish, sculpted lines of the Indian and actually manage to improve the bike's overall appearance. From the rear, the Turndown tips feature a shapely chrome hood over the exhaust outlet, which directs gases down and away from the fender and saddlebags. The

TOOLS NEEDED

- Glass cleaner
- Blue Loctite
- 1/4" nutdriver
- Flat-bladed screwdriver
- 1/2" socket
- 13mm deep socket
- 15mm deep socket
- Torque wrench (ft-lbs.) ■



2 Using a 1/4" nutdriver, Rob opens the stock rear heat shield rear clamp. You can also use a flat-bladed screwdriver.

A black and white photograph of a car's side-view mirror. The mirror reflects a motorcycle on a road ahead. The text "MOTORCYCLE CLAIMS ARE MORE COMPLEX THAN THEY APPEAR" is overlaid in red capital letters on the mirror's reflection.

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3 Using a 1/4" nutdriver, Rob opens the stock rear heat shield front clamp. You can also use a flat-bladed screwdriver.



6 Rob can now use a 13mm deep socket to remove both rear right muffler support bolts.



4 Rob uses a 15mm deep socket to loosen the right muffler's header clamp.



7 Rob gently moves the muffler slightly up and down as he pulls it back to get it off its header pipe.



5 After popping off the rubber cover, Rob uses an 8mm wrench to remove the antenna. He then lays the antenna safely aside for now.



8 Rob slips the Vance & Hines Torca muffler clamp onto the front of the right V&H muffler. He then coats the inside of the muffler with muffler sealant, as he does with all his exhaust installs.



9 After slipping the new V&H muffler onto the stock header, Rob attaches the new muffler to the stock bracket using the V&H-supplied flanged bolts, blue Loctite, and a 1/2" socket.



10 After positioning the clamp vertically (nut facing down) on the muffler, Rob torques the new V&H-supplied Torca clamp to 40-45 ft-lbs. using a 15mm deep socket.



11 Rob reinstalls the antenna on its stock mount by putting the antenna stud through the bracket and slipping its collar over the stud. Rob secures it using the stock hardware and then pops on the rubber cover.

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But first here's the problem.

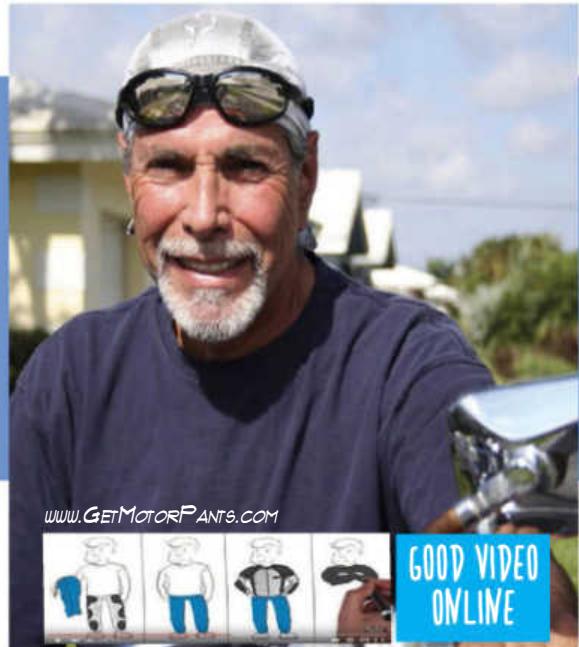
I don't ride fast, am careful and usually considerate. But it's the others - traffic, trucks, dogs and deer, gravel and diesel spills. Fact is I'm more nervous than I was.

But I really like riding in jeans and my favorite jacket and just don't want to get all suited up **EVERY TIME I RIDE**. Specially in the summer when most of us ride.

So when I heard about this Bohn gear - it's like armored long John's, it got me thinking.



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I usually wear a base layer anyway, comfortable under my jeans, and feels good on top. So this Bohn Bodyguard System is like that but with slim pads set into pockets all around.

Basically where you'd land if you wrecked. Once I have them on you can barely see or feel it's there, and my normal jeans fit right over.

So they're comfortable to wear all day on the bike, and are cool which is important. There's lots of impressive crash reports on the site, but I haven't been down myself. Thankfully.

It works for me, I feel secure.

You should check it out online, and I'd say give 'em a try, as you get 90 days to actually use them without hassle. I got the pants first, but there's a good deal for the pants/shirt combo. Made in the USA too.

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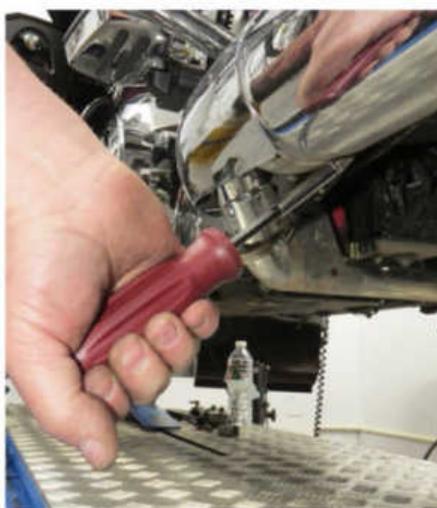
amazon.com

SPARKPLUGS.COM

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12 Rob then reinstalls the stock heat shields using a 1/4" nutdriver. You can also use a flat-bladed screwdriver.



13 Uses a 1/4" nutdriver, Rob opens the stock left heat shield clamps and does the same for the left muffler as he did for the right, but without the antenna.



14 Don't forget to reinstall the stock rubber guards. Rob then wipes the entire system down with glass cleaner.



15 Here's how the new chrome Vance & Hines muffler system looks installed!

mufflers have a blue-proof chrome finish and can be used with Vance & Hines' optional quiet baffle, depending on what level of loud suits you best. The Classic slip-on is also available if you want all the sound and performance, but with the traditional exiting tip.

This isn't our first performance enhancement to this Chieftain; you might remember a S&S air cleaner kit and a Dynojet Power Vision tuner awhile back. If you're only installing a set of Vance & Hines slip-ons, you don't need to install a fuel tuner or have the bike tuned, making this an easy way to pull some more power and a better sound out of your Indian.

Like many of our performance projects, we installed the Vance & Hines Turndown slip-ons with Rob of Rob's Dyno in Gardner, Massachusetts. Once the install was complete, he punched the new info into the Power Vision and our Chieftain is all good to go. The install is pretty straightforward; you can follow the photos and captions to see step-by-step exactly what's involved in this slip-on swap.

AIM

SOURCES

ROB'S DYNOSERVICE
978/895-0441
Rob'sDyno.com

VANCE & HINES
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LOVE JUGS

70-degree lower engine temps for our Road King

THE FIRST TIME I HEARD OF LOVE JUGS I THOUGHT it was the title of a porn movie. Okay, so maybe I shouldn't have told you that. But what I should definitely tell you is that a set of Love Jugs fans provide extreme cooling power directly to your Harley's combustion chamber and exhaust valve area. For this added charge of coolness, we installed the original Love Jugs Slots system (#SD-320/\$349) on our 2006 Road King. Practically, we all know that increasing air flow over an air-cooled engine will lower its overall temperature. Your rear cylinder runs hotter than the front because it's mostly getting the hot air flowing from the front cylinder. Of course, there's no air flowing over the whole engine when you're sitting in traffic on a hot day.

Love Jugs achieves its massive cooling potential by flowing 504 CFM of air from a pair of electric fans (252 each) directly to where it's needed most, whether the engine is sitting at idle or out on the open highway. Love Jugs are

available in a chrome or black powder-coat finish and are made entirely from aircraft-grade stainless steel. The outdoor-rated electric fans are entirely waterproof to the degree that they can actually run underwater. This may seem like overkill to the casual rider, but long-distance riders know how important weatherproof equipment is.

In addition to a cooler top end, Love Jugs, by default, also keeps a Harley's oil much cooler as well. Cooler, more

Here's our 2006 Road King up on a lift with its seat removed and the battery's ground cable disconnected.



TOOLS NEEDED

- Blue Loctite
- 10mm wrench
- 10mm socket
- 3/8" socket
- 1/2" socket (deep)
- Flat-bladed screwdriver
- Chisel
- Hammer ■



2 Using a 1/2" deep socket, remove the acorn nut that holds the stock horn to the bike. Then pull the horn from its rubber vibration isolator.



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3 After disconnecting the two horn wires from the stock horn, pry open the horn wiring harness clamp with a flat-bladed screwdriver and remove the wiring harness.



6 Then thread one of the supplied 1/4" flat large rubber washers onto the bolt, on the backside of the Love Jugs nameplate.



4 Unscrew the stock rubber vibration isolator, which isn't reused, from the horn bracket. The rubber will probably tear off, so you'll need to use a hammer and chisel to get the steel section off.



9 Use a 3/8" socket to remove the two bolts from the stock horn and bracket. Leave the stock nutplates on the horn cover. However, the bolts will not be reused.



7 Install the two supplied large rubber isolators onto the front (name side) of the nameplate and secure them using a supplied lock washer and nut and a 1/2" socket.



10 Slip the supplied chrome Love Jugs strengthening bracket (right) into the back of the stock Harley horn bracket (left).



8 Now install the chrome Love Jugs nameplate assembly to the stock horn bracket using some blue Loctite and a 1/2" socket. Make sure the name plate is level when you tighten it down.



11 Place the chrome Love Jugs assembly onto the face of the stock horn bracket/strengthening bracket.

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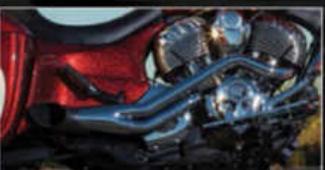
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12 Place the stock horn assembly onto the face of the Love Jugs assembly so the horn cover's ear and its nutplate are under the wiring harness.



13 With a supplied flat washer on each of the supplied $1/4" \times 5/8"$ bolts, loosely join the horn, Love Jugs assembly, stock horn bracket, and strengthening plate together using a 10mm socket. Don't forget the wiring harness clamp (not shown).



14 Then slip the Love Jugs three-hole flat plate into the Love Jugs stainless steel cover and align the holes.



15 After putting a supplied lock washer onto the last long $5/16"$ supplied bolt, slip the bolt into the center hole of the stainless steel cover.



16 Using a $1/2"$ socket, thread a supplied $1/4"$ thick rubber washer onto the bolt, so the rubber washer is outside the cover.



17 Attach the cover (notch on top) to the Love Jugs assembly using a supplied flat washer, lock washer and acorn nut, and a $1/2"$ socket. Make sure the cover is level with the Love Jugs assembly.



18 Make sure the stock horn wiring harness clamp is positioned as shown (arrow). Then position the fan assembly alongside the engine and slip the stock horn wiring harness back into its clamp.



19 Place the fan assembly onto the two rubber isolators and put on a supplied flat washer, lock washer, and acorn nut, with some blue Loctite, onto each one. Tighten the acorn nuts with a $1/2"$ deep socket.

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20 Now reconnect the stock horn wires to the stock horn's spade connections. Then tuck and wire-tie the Love Jugs harness to the bike's stock harness that runs under the gas tank. No need to lift the tank.



21 Use either the Deutsch connector that comes on the Love Jugs harness, or splice in this supplied fuse setup and use the supplied wire connectors to hook the system to your bike's battery.

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WHEN UNSCREWING THE horn's stock rubber vibration isolator from the engine mount, the rubber section usually tears off from the steel section. If this happens to you, no worries, since the mount is not reused. Use a hammer and chisel to bite into the steel plate's edge to push it in a counterclockwise direction and unscrew it from the engine mount. You'll only get it to move a tiny bit at a time at first, but as it loosens, it will turn more and more.

**TIPS &
TRICKS** When attaching the stainless steel cover assembly to the Love Jugs assembly, if you can't get enough threads to protrude to thread on the acorn nut, remove the lock washer from the group. Then thread on just the acorn nut and tighten the hardware down to squeeze everything together. Then remove the acorn nut, install the lock washer, put the nut back on again and tighten. ■

THE TEST

LOVE JUGS PROMISES THAT ITS two-fan device will drop the engine temperature of a Harley-Davidson by 100 F in four minutes. Since the Love Jugs crew and I were going to be in Daytona for Bike Week, it was a good time to put their claim to the test. When I got to the Love Jugs booth at about noon, it was 80 F out, and the test bike had already been idling for a few hours. I checked the temp of the bike's chassis and the pavement under it. They were about 100 F, which told me everything was well heat soaked, just as they would be on a hot summer day. After shutting off the Love Jugs fans, we set a temperature gun on a tripod and aimed it at a point on the rear cylinder head right next to the spark plug. After waiting until the head was 400 F — way hotter than you should allow your engine to get — I turned on the fans and started the clock. After four minutes, I took my reading: the cylinder head temp had dropped 70 F! Though not the claimed 100 F, I would have been amazed if it reached that goal since we let the cylinder head get much hotter than normal. Bottom line: I was impressed! Love Jugs definitely work well. ■

viscous oil leads to a longer-lasting engine and less wear and tear.

Several different Love Jugs models are available, as well as vibration dampening options, and come with everything you need for the installation. All Love Jugs models will fit 98 percent of all Harley-Davidsons ever made as long as there's a horn mount on the left side of the engine. Love Jugs makes some pretty hefty claims about its product, so we decided to do our own test, conducted by Editor Chris, as we reported in an earlier issue and have included in this article in an accompanying sidebar. If you've been looking for a way to improve the cooling of your Harley-Davidson, check out the step-by-step install to see exactly how to make that happen! AIM

SOURCES

LOVE JUGS
Love-Jugs.com

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REKLUSE EXP AUTO-CLUTCH

Breeze through traffic without pulling the clutch lever

IGOT TO SPEND SOME RIDING TIME WITH AIM AD SALES representative Ken McCurdy at the 75th Sturgis rally this past summer. If you were there, or even read about it, you have an idea of the crowding that almost a million motorcyclists descending on a small town with three roads can cause.

So there we were, sitting in traffic on I-90, waiting to exit for Black Hills H-D along with thousands of others, with my clutch hand starting to get a little sore. So, I would shift my Limited test bike into neutral for a few seconds, stretch my hand, kick back into gear, and move forward another few feet. That's when I noticed Ken coolly and comfortably moving forward without even kicking the shifter or using the clutch. He would just give a little throttle as we duck-walked our bikes forward. His clutch must be broken, I thought, so I asked him about it. Turns out, he had recently equipped his 2006 Road King with a Rekluse EXP 3.0 clutch kit (#RMS-6203C/\$799), which prevents engine

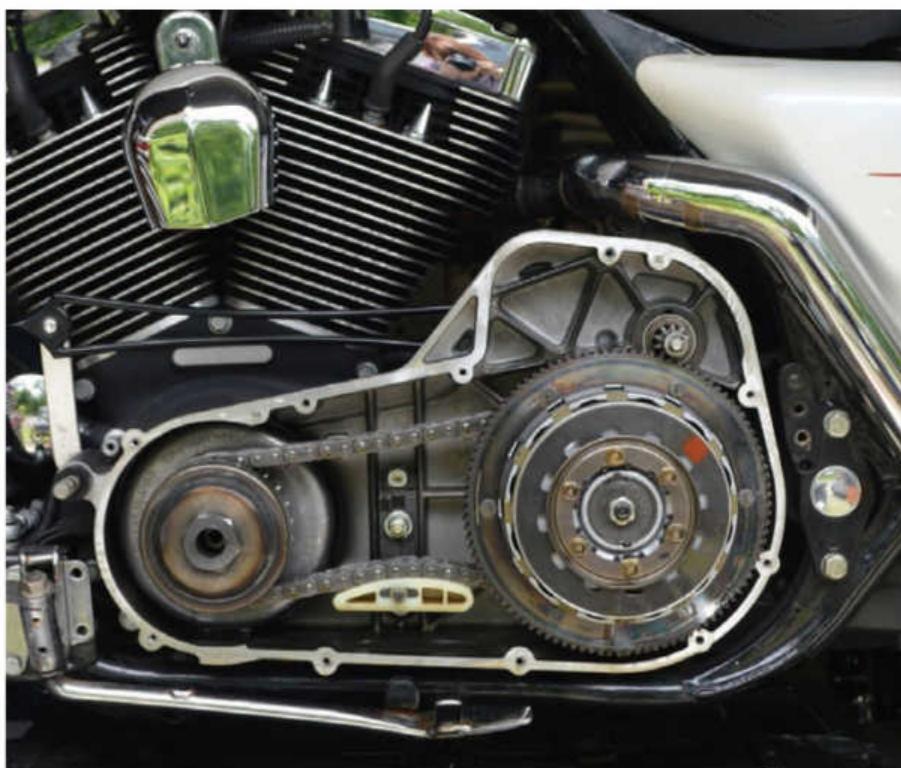
Our opening shot has our 2006 Road King up on a bike lift with its primary cover, shifter levers, front and rear left floor-boards removed. A H-D oil drip pan is under the bike to catch the old primary fluid.

stalling by using centrifugally driven technology.

The Rekluse EXP clutch system allows the user to take off and stop in gear without having to use the clutch lever, allowing for precision maneuvers at extremely low speeds while the rest of us are balancing clutch, throttle, and

TOOLS NEEDED

- Blue Loctite
- Oil drip pan
- Pick tool (90-degree tip)
- Flat feeler gauge
- T-27 Torx
- 3/16" Allen
- 7/32" Allen
- 1/2" wrench
- 9/16" wrench
- 10mm socket
- 11/16" clutch nut socket
- Torque wrench (in-lbs.) ■



2 The Rekluse clutch friction disks and EXP disk must soak in new primary oil for at least five minutes before installation.

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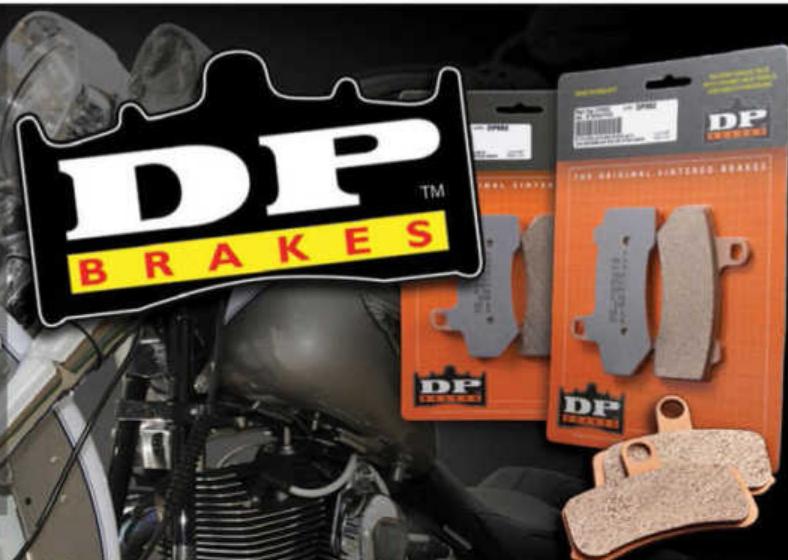
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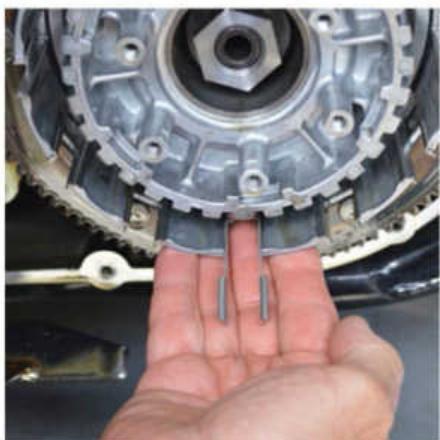
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3 We're using a Motion Pro 11/16" clutch adjusting nut socket (#08-05-48) to remove the clutch adjusting nut and screw.



6 Pull the stock pressure plate from the clutch housing. It may be stuck to the oily clutch plates, so gently jar it loose. This will be reused.



9 Insert the 12 Rekluse basket sleeves into the stock clutch basket's slots. The side with the tabs faces in towards the clutch hub. Make sure the sleeves go all the way down to the base of the clutch basket.



4 Use a 10mm socket to remove the six stock pressure plate bolts.



7 Pull all the stock steel and friction plates from the clutch housing. They will not be reused.



10 Slip the Rekluse judder spring friction disk (doesn't matter which way) into the basket sleeves. Use your thumbs to carefully work each tab into its basket sleeve as you work your way around the basket.



5 Now pull the stock spring hold-down ring (left) and diaphragm spring (Belleville) from the clutch housing. The diaphragm spring will be reused, but not the stock spring hold-down ring.



8 Don't forget to also remove the stock judder spring (rear) and spring seat (not shown) using a pick tool with a 90-degree tip. These will be reused.



11 Next in is the stock damper spring seat, followed by the stock judder spring, bevel facing out.

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12 Next in is the Rekluse thick drive plate, the thickest steel plate. It may help to use an angled pick tool to move the basket sleeve out of the way when installing the Rekluse clutch plates.



15 Install the EXP disk after the last steel drive plate. The EXP disk goes in either way, but make sure you align the notches in its tabs with the notches on the friction plate tabs.



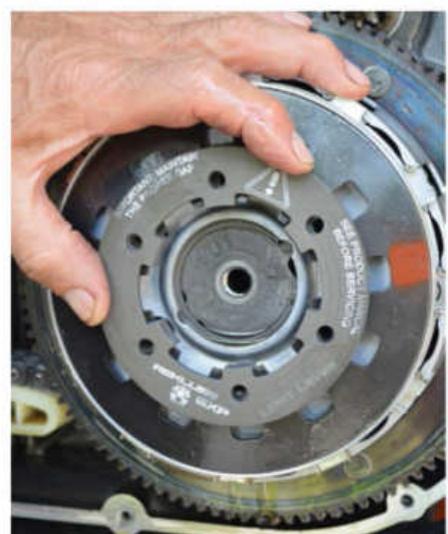
18 Install the stock OEM diaphragm spring.



13 Now slip in a Rekluse friction plate. Put it straight in, don't angle it. Again, if needed, use an angled pick tool to move basket sleeves out of way. Note the notches on some of the tabs.



16 After you pull the rubber boot out of the way, use a 1/2" wrench and a 9/16" wrench to fully collapse the clutch cable adjuster.



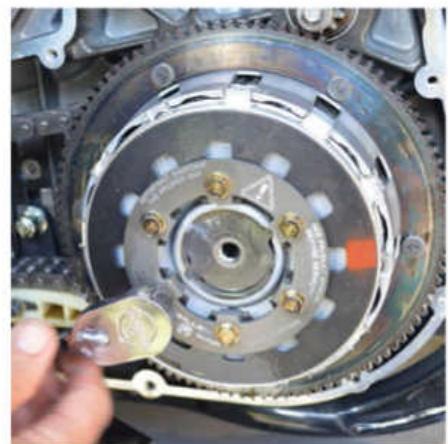
19 Install the Rekluse spring ring with its tabs engaged with the notches on the spring and its holes aligning with the holes in the clutch hub. We used the light lever spring ring since we have a stock motor.



14 Next in is a Rekluse regular steel plate; it doesn't matter which way it goes in. Then another friction plate goes in, but always align the notches on friction plates. Next is a steel plate, etc.



17 Reinstall the stock pressure plate with OUT on the throwout adjuster that's in its center, facing out.



20 Secure the Rekluse spring ring to the clutch hub using the stock 10mm socket. Torque the stock bolts to 90-110 in-lbs. in a crisscross pattern.



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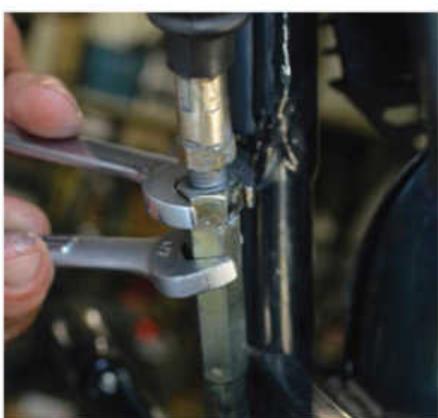
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21 Reinstall the stock pressure plate adjusting screw and its locknut. Gently turn the adjusting screw in until it stops under moderate pressure. This is the starting point. Then turn the adjusting screw another in 1-1/4 turn.



22 Using an 11/16" clutch nut socket and a 7/32" Allen, lock down the pressure plate adjusting nut. Then adjust the clutch cable at the adjuster as per the procedure in the bike's service manual.



23 After putting a new gasket on the inner primary cover, install the stock outer primary cover using the stock bolts, blue Loctite, and a 3/16" Allen. Torque the bolts to 100 in-lbs.



24 With the bike upright (not on the kickstand), we used a H-D filler neck to refill the primary compartment with H-D primary fluid until the oil level was up to the bottom of the diaphragm spring.



25 Reinstall the stock derby cover with a new gasket, the stock bolts, blue Loctite, and a T-27 Torx. Reconnect the battery ground cable and test the system as per the Rekluse instructions.

rear brake to get around a tight parking lot. The Rekluse kit comes with a whole new TorqDrive clutch pack that has a higher torque capacity than stock and can transfer power faster.

Besides the obvious difference, using a Rekluse EXP clutch is no

different than regular clutching. You still pull the lever when changing gears, and shifting feels no different. The clutch can still be used at any time, too, so some situations where a clutch is needed (like rolling the bike backwards) can be done. As an added benefit, since the greatest wear on a clutch occurs in stop-and-go traffic, your clutch will run cooler and last longer. The cool part is that using the clutch is totally optional. You can if you want, don't have to if you don't. As for Ken, he loves it!

Installing a Rekluse auto-clutch involves nothing more than changing out the clutch pack, and no modifications are required. Not that you'd want to, but you could swap your stock clutch back in at any time, like if you decide to sell your bike! The accompanying photos and captions show Editor Chris installing the Rekluse EXP clutch in just a few hours on Ken's 2006 Road King. Next year, you can be the envy of just about everyone, except Ken, at Sturgis! **AIM**

SOURCES

REKLUSE
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* CRACKED OR BROKEN SWING ARM?

* STOCK REPLACEMENT NA?

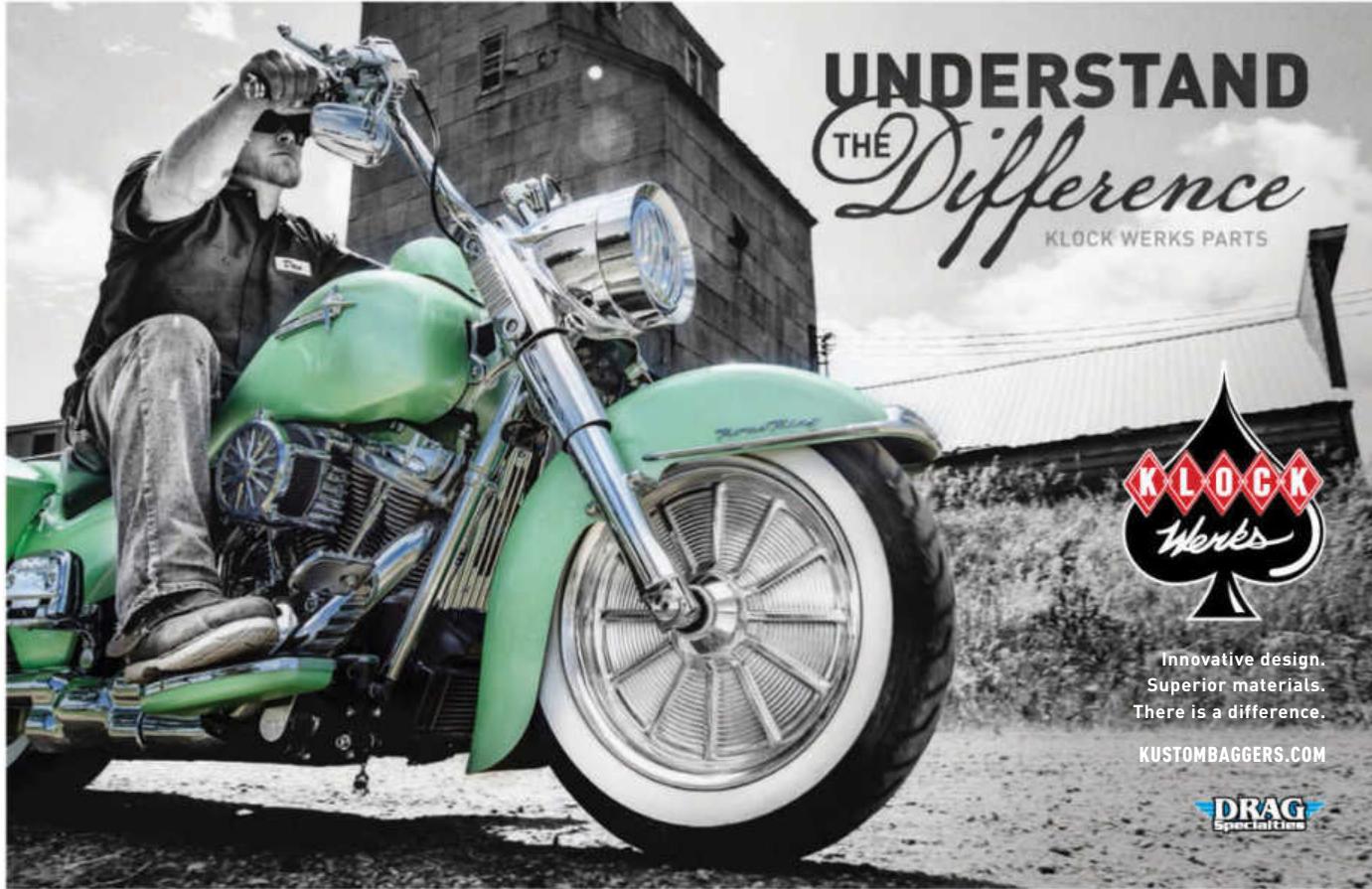


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Part V: Bring on the steel and leather!



1 Here's where we left off in the last issue. As you can see, the Woodstock Harley-Davidson crew has almost finished the build. This time around, they'll be installing the finishing touches.

FOR THIS FINAL INSTALLATION SERIES ON THE Springer raffle bike, Woodstock H-D techs Denis, Glen, and Justin will be finishing up the controls and installing a new seat and saddlebags. Magnum Shielding provided the black throttle cables to replace the stock plastic-looking ones, so nothing can take away from the bike's cohesive appeal. Who remembers the Softail CrossBones? One of the most popular features of that bike was the sprung solo saddle, and H-D happens to still sell that as part of a kit in the P&A catalog. The sprung, but well-padded, CrossBones seat fits perfectly with our bike's retro theme, but Heather's Leathers took the concept to a whole new level by reupholstering the seat with black leather, fringe, studs, and conchos. Heather's Leathers also provided a beautiful set of matching saddlebags, which look right at home on our prewar Big Twin look-alike. A round, black engine guard was also installed, as most Big Twins from that era carried them. And the design hasn't changed much, in case you're wondering.

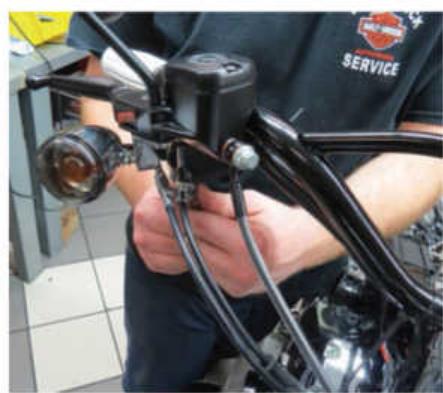
After taking apart, inspecting, and replacing several of the components, the crew can reinstall the freshly painted, stock gas tank. John Dills of Dills Paintworks in Cullowhee, North Carolina, laid down the spray for this project. John paints all



HOW TO ENTER

SO HOW DO YOU GET A TICKET to win this year's Harley-Davidson Softail Springer Classic? The best and quickest way is to enter online at OfficialBikeWeek.com with your Visa, MasterCard, or American Express card. Not into computers? Mail your name, address, telephone number, the number of tickets you want, and a check for the correct amount (\$50 per ticket) to the Daytona Beach Community Foundation, PO Box 2676, Dept. A/M, Daytona Beach, FL 32115-2676. Got questions? Then call the foundation at 386/255-0981.

The drawing will be held at noon on Saturday, March 12, on the main stage in Riverfront Park on the corner of Beach and Main streets in Downtown Daytona Beach. Only 4,500 tickets will be printed, so don't delay. As always, you don't have to be present to win, only your entry does. Good luck! ■



2 Justin finishes off the handlebar install by attaching the new black Magnum Shielding throttle cables. He then adjusts them using a 10mm wrench and 3/8" wrench.



3 Meanwhile, Glen mounts the H-D Cross Bones seat mounting bracket and spring set to our Heather's Leathers reworked Cross Bones seat. Yup, this seat came out beautifully, as you can see in this issue's color feature.



4 Glen then installs the H-D supplied Cross Bones support onto the frame.



5 Justin replaces all the gas tank's internal fuel lines, as well as the gas tank gasket, with all-new genuine Harley-Davidson parts. The fuel pump works fine, so that was left alone. Justin then reassembled the tank.

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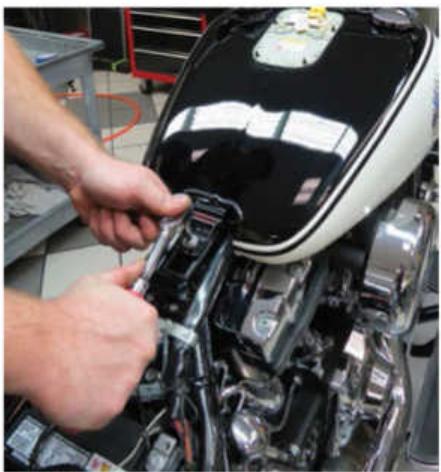
6 Bikes in the late 1930s had engine guards, and so will our bike. This black one is another part from the Harley-Davidson stockpiles.



9 Once he has both saddlebags secured to the rear fender struts, Justin closes the bags using the three chrome buckles. Check out that 75th Daytona Bike Week logo stamped into the top of each bag lid.



12 Before they install the new Cross Bones seat, Glen uses a new PowerVision tuner from Dynojet to upload a base map for the engine's air/fuel mixtures. We'll put the bike on the dyno later on to dial it in.



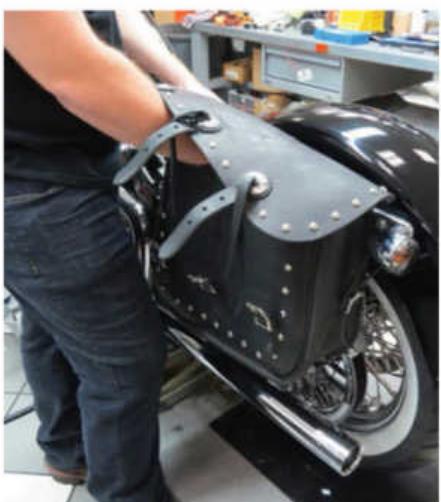
7 Glen then reinstalls the freshly repainted stock fuel tank. Be sure to check out those official 2016 75th Anniversary Daytona Bike Week logos that were hand-painted by Mark Peters of Peters Auto Art in the bike feature.



10 Justin now assembles the new Harley-Davidson black vintage dash and original speedo, new indicator bar, original key switch, and new rubber trim.



13 The Harley-Davidson Cross Bones seat frame cover, which Denis altered to fit our bike, goes on next.



8 Justin next installs the new Heather's Leathers black leather saddlebags on the bike.



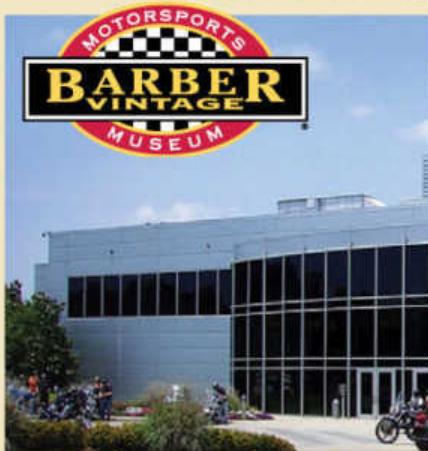
11 Justin then installs the new dash assembly onto the gas tank. We're also installing a new Harley-Davidson black leather tank cover, which extends down to the black leather Harley-Davidson Cross Bones seat.



14 The last part on is the new Heather's Leathers reworked Harley Cross Bones seat. As you can see, Wayne and the crew at HL covered the stock seat pan in thick black leather, some fringe and studs, and two conchos.

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sorts of motorcycles, — new, old, custom, stock — but his expertise comes into play here as he's the guy who paints many of Dale Walksler's bikes at Wheels Through Time museum; he's been doing it for 10 years! For a project like this, one that will hopefully see a lot of road time over the years, he opted for PPG Deltron for the black basecoat followed by a PPG Deltron clearcoat for the ultimate shine and protection. This is a bike that gets ridden to the show, and John's confident that the PPG paints will stand up to whatever the new owner can throw at it.

Let's back up a sec, though, before applying the PPG clear. John handed the tins off to another Wheels Through Time expert, Mark Peters of Peters Auto Art in nearby Asheville. Mark's a pinstripe and hand-brush painter extraordinaire; that's right, I said hand-brush, not airbrush. Mark

hand-painted these beautiful 75th Bike Week logos on the gas tank, which memorialize this bike as the Official Motorcycle Of Daytona Bike Week's 75th anniversary.

Lastly, we use a Dynojet Power Vision on many of our performance installs and find that it's an excellent tuning system for setting an engine's air/fuel mixtures, no matter the extent of engine mods the bike has. Talk about modern performance; the Power Vision is a handheld computer that monitors engine performance. Adjustments can be made right on the touch screen after plugging it into the diagnostic port.

And with that final touch of 2016, this retro Softail Springer is ready to serve its new owner for many cool, comfortable miles. A special thanks goes to the entire team at Woodstock Harley-Davidson, including Parts



15 Here's the crew with the just finished bike: from the left, Greg Platkin, Justin Reynolds, Glen Helsley, Denis McLaughlin, and Alex Litwinenko.

Manager Greg Platkin who was responsible for getting all the correct parts for the build. Of course, all the suppliers who provided parts for the bike are much appreciated by us, the Daytona Chamber who benefits from this raffle, and, naturally, the new owner (which could be you!). Take a peek at the accompanying photos and captions to see the last part of the (your?) custom Springer come together, and be sure to check out the full feature story on page 48. **AIM**

SOURCES

BIKER'S CHOICE

BikersChoice.com

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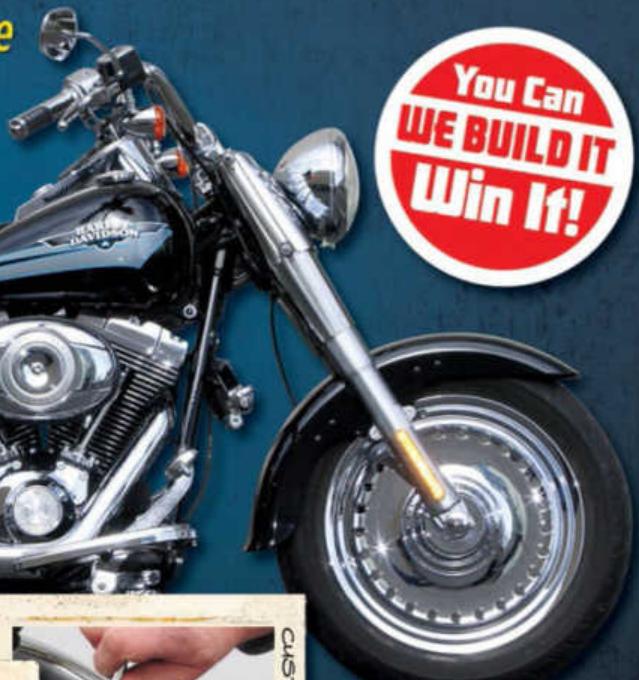
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ACCEL STEALTH SUPERCOIL

Our 2004 Dyna gets a left-side look and performance upgrade

Here's our 2004 Dyna Super Glide up on the lift with its seat and dash removed, the battery ground cable disconnected, and the gas tank hoses all disconnected except for the fuel crossover hose. All the tank mounting hardware is also removed except for the front bolt, which is just loosened.

GO OUT TO YOUR GARAGE AND TAKE A LOOK AT the left side of your Dyna. What's the ugliest, most awkward thing on it? It's probably that big ol' ignition coil bolted below the seat and those long-ass spark plug wires that aren't quite as black as they were when you first bought the bike. Up until recently, the only fix was a chrome cover and some new wires.

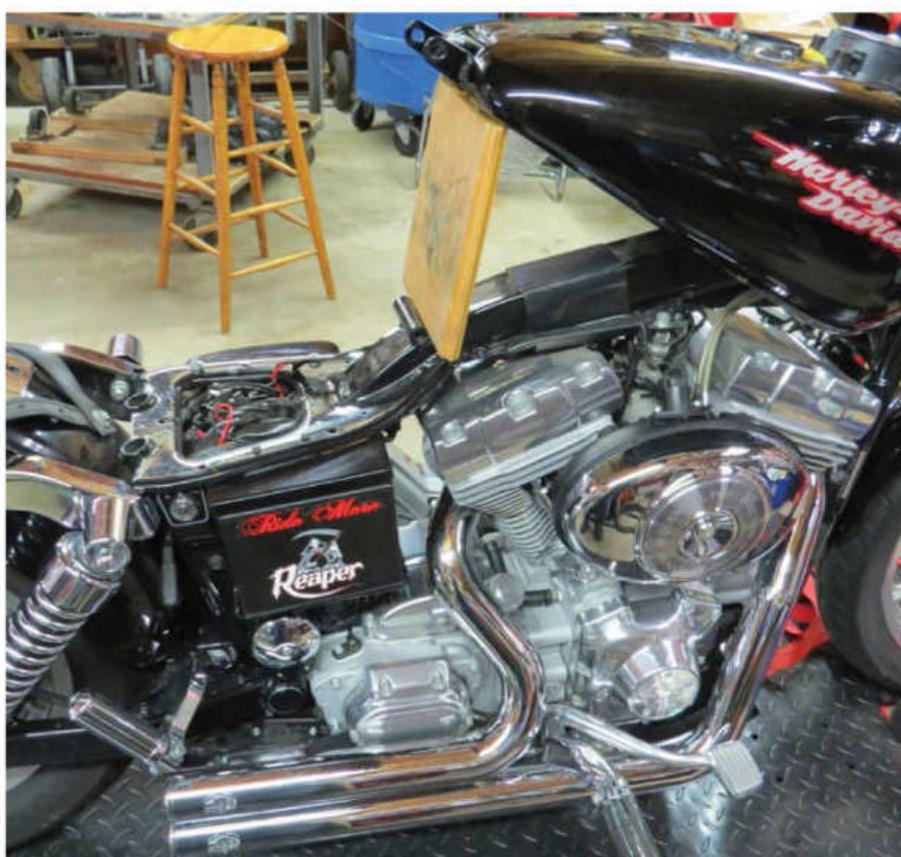
Luckily, there's another option out there these days for Harley owners who don't want that necessary piece of equipment standing out like a sore thumb on their otherwise beautiful bike. So that's why we decided to install ACCEL's Stealth SuperCoils (#140411NI/\$229.95) on our 2004 Dyna Super Glide. SuperCoils completely do away with an ignition coil and spark plug wires by mounting individual coils directly on top of the spark plugs. Not only does this clean

up the look of the bike, but mounting the coils to the spark plugs provides the maximum amount of electrical energy to the plugs. There's a reason why car companies have been using these types of "blaster coils" for years.

The mounting package is clean and concise with the coil itself being covered by a finned cast aluminum cover that matches the fins and color of any

TOOLS NEEDED

- Wire cutters
- 1/8" Allen
- 5/32" Allen
- 3/16" Allen
- 1/2" wrench
- 1/2" socket
- Torque wrench (in-lbs.)
- Torque wrench (ft-lbs.) ■



2 After pulling the spark plug wires off the plugs, first on are the four cast aluminum head stud mounts, which are secured using the supplied setscrews, blue Loctite, and 3/32" Allen.

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3 After removing both plug wires from the stock coil, remove the coil from its mount using a 3/16" Allen on the two mounting bolts.



6 Install the front ACCEL SuperCoil onto the two head stud mounts using the supplied bolts and a 5/32" Allen (no Loctite). Do both coils and covers at this time.



4 Unplug the coil harness from the coil by lifting up on the tab and pulling the connector back and away from the coil.



7 Then, noting that the connectors are marked "front" and "rear," attach them to the supplied SuperCoil harness connectors until they snap into place.



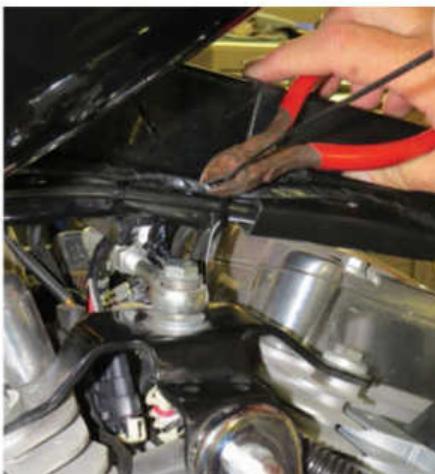
9 Attach the other end of the ACCEL harness to the connector for the stock coil. Then tuck this connector into the gap behind the stock coil bracket and wire-tie it into place.



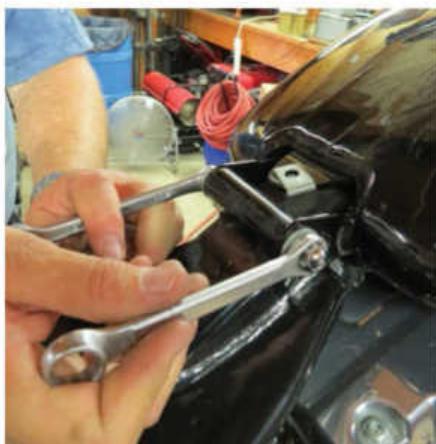
10 Lower the gas tank and reconnect the stock gas line to its attachment on the tank. You may want to keep the tail of the tank a little lifted, so the line goes into the fitting straight or you'll tear the O-ring (lube it first).



5 Wrap the coil wire around the new ACCEL cover and between the fins with the slot cut into it. The front coil has its slot on the rear (left side) of the cover; the rear has the slot on the front (right side).



8 Then tuck the two connectors into the gap behind the throttle body, and wire-tie the ACCEL harness to the stock harness that runs along the bottom of the gas tank.



11 Reinstall the rear tank bolt and flat washer on the left side with a flat washer and the nut on the right. Torque the bolt to 10-18 ft-lbs. using a 1/2" socket and 1/2" wrench. Then do the same on the front mount.



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12 Reconnect the vent tube (A) and the connector for the fuel gauge.



15 With the dash's rubber seal fully seated, secure the dash using the four stock screws and a 3/16" Allen. Torque the bolts to 18-24 in-lbs. Then use a 3/16" Allen to reinstall the bolt for the tail of the dash.



13 Position the mount bracket for the dash cover around the fuel gauge.



16 With the tab on the filler neck ring aligned with the notch on the filler neck outer collar, secure the collar using an 1/8" Allen and the stock bolts. Torque the bolts to 20 in-lbs. as per the H-D procedure.



14 The stock ring goes around the filler neck, with the side with the single tab (arrow) facing up and at the 11 o'clock position. This ring will only fit correctly one way.



17 After reinstalling the seat and firing off the engine to make sure everything runs as it should, here's how the finished assembly looks. **AIM**

IF YOU HAD TO LIFT THE GAS tank for this install, when reinstalling the filler neck outer collar, note that three of the stock screws are longer than the others and these go in the 12, 4, and 8 o'clock positions. ■

TIPS & TRICKS

stock Harley engine. The finned cover has the added bonus of assisting the existing cylinder head fins to dissipate heat from the heads. Obviously, there have to be some wires, but on the Stealth SuperCoils, they're small and easily hidden, hence the Stealth part.

Installing the ACCEL Stealth SuperCoils is straightforward with the provided components. The most difficult part, if you have to do it, is lifting the gas tank to access the wiring loom. Some Dynas, or even people with sneaky fingers, can get away with not lifting the tank, but we'll show you step-by-step how to do it (and put it all back together) just in case. You should plan on devoting a couple of hours to this project, and you can follow along for the full procedure to take your Dyna's left side from ugly and awkward to clean and efficient.

SOURCES

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Cracked Pipe, Fuel Tuners & Front End Swap

Q: My 2005 FLHTC has a rear exhaust crack at the Y-pipe. Any suggestions for a repair, or should I look at a completely new system? A new one is rather pricey.

TOM ANGUISH

Via Internet

A: I've tried welding and gusseting these pipes in the past. Sometimes they hold, sometimes they don't. If you're okay with taking the system off and on, try welding it. Just make sure as you reassemble the system that the pipe didn't bend out of alignment during the welding process. Assemble everything loosely and tighten it all up from the heads back, making sure nothing is stressed or out of alignment.

A new pipe for your bike will cost you about \$265, plus clamps and gaskets. Compared to a new system, I don't think that's too bad. Before you order anything, look at the brackets that mount the pipe. There's one on the side

Has the rear exhaust pipe on your bagger cracked at the Y-pipe? Check the brackets that mount the pipes, especially the silver one (arrow) over the starter motor. This bracket is attached to a black bracket that's connected to the crankcases via the starter motor's mounting bolts. If the tip on this silver bracket breaks off, like this one did, it can cause the header pipe to crack.



To submit a question to our H-D-certified mechanic, who has been working in dealerships for over 20 years, send in as much info about the problem and bike as possible to Hog Helpline, c/o American Iron Magazine, 1010 Summer Street, Stamford, CT 06905, or e-mail ChrisM@AmericanIronMag.com. Sorry, but due to volume, we cannot respond to requests for personal replies or to all letters.

of the transmission and another one over the starter motor, attached to one of its mounting bolts. These mounts can crack, causing more vibration and stress on the pipe. Check the rubber mounts at the back of the mufflers to make sure the system isn't contacting the frame anywhere. Also check the front engine mount to be sure it isn't collapsed and transmitting excessive vibration.

Q: I ride a 2009 Electra Glide Classic. When I first got it, I put on Vance & Hines pipes but left the headers stock. The shop I take it to put a Terry Components fuel management

system on it, and I averaged 45 mpg. In 2014, I wanted Vance & Hines true duals put on. I took the bike to the same shop, and the tech recommended a switch to gears from the cam chain drive setup. I agreed. At the time, my bike had around 20,000 miles. When the true duals were put on, the catalytic converter was left out, as the tech said this will help the bike run cooler. The first trip afterward, the bike ran alright, though it backfired a lot. I returned to the shop, telling the tech I was not happy with the job. He said that fuel management systems had come a long way, and he could install a

different one for me and have another shop dyno the bike. When I suggested a Power Vision or a Power Commander with Auto Tune, the mechanic

countered by saying I should get a Screamin' Eagle, to which I again agreed. The tech did all the work, and after I picked it up, it did not backfire. My fuel efficiency, however, has severely dipped to around 20-21 mpg. Back at the shop again, the tech suggested I get a Vance & Hines Fuel Management System. When I asked what gears he put in, he couldn't remember. Should I put everything back the way it was, or do you have a better idea?

ERROL BIRD

Council Bluffs, IA

A: First of all, Errol, unless your motorcycle was sold in California, it didn't have a catalytic converter. That didn't come on 50-state models until 2010. So that makes me wonder about what this shop is telling you. Second, if you're getting terrible fuel mileage since the tuning, the engine must be running very rich. For what you are doing with your bike, the original Terry Components system should have been fine. That said, now that the Super Tuner is installed, I would stay with it. Did the tech change the

cams when he installed the gears? The gear drive itself won't affect your fuel mileage or backfiring, but if the cams were changed you can definitely lose some mileage per gallon. Leave the gears but verify what cams you now have.

I'm pretty sure that whoever tuned out your backfiring made the map too rich overall. It's possible there is a slight exhaust leak at the head pipe or at an O₂ sensor. A good dyno tuner will check that before he starts retuning the maps. Then he should be able to reduce the backfiring while tuning the cruising portion of the map for optimal performance and fuel economy. See if you can find a reputable tuner with experience on the Super Tuner. Tell him you want good performance but also the best fuel economy you can. He should be able to make that happen with the Super Tuner.

Q: I have a frame, motor, and transmission from a 1990 Tour Glide. It's missing the main wiring harness and front end. I came across a full front end for a 1997 Ultra Classic with

complete main wiring harness, fairing and harness, mounting brackets, etc. It fit right on the 1990 frame, but is it possible to use the 1997 wiring harness on the 1990 frame? Can it be used on the motor and transmission with only some connector mods? I know the battery needs to be moved if it is used, but I need tech advice on the rest.

MARK ZANKIEWICZ

Via Internet

A: I think you'd be better off using the front fork and keeping the original wiring harness. Then all you need to deal with is the front of the harness. What you need to change and adapt in front will be a lot less trouble than changing the whole harness. The Ultra had fuel injection so the ignition wiring would have to be changed for the 1990. Use the old harness, and the battery won't need to be moved. The 1990 harness had circuit breakers in front; the Ultra had fuses in the back, so you'd have to rewire the harness to supply them. Your handlebar switch connectors can also stay stock with the 1990 harness. **AIM**

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Folding Footpegs



Got a question about a problem on your Sportster? Send your query, with as much info on the bike as possible, to American Iron Magazine, Sportster Corner, 1010 Summer Street, Stamford, CT 06905, or e-mail it to ChrisM@AmericanIronMag.com. Sorry, due to volume we cannot respond to requests for personal replies or to all letters.

Q: My bike is a 2009 SL 1200L Sportster. I've been looking for shorter pegs for my bike as most manufacturers only carry the standard 4-1/2" peg. I checked with my H-D dealer and asked a JP Cycles tech, but so far no help. When I'm riding with the boys, we get moving in and around turns, and I'm always scraping my pegs. I'm looking for shorter, good-looking pegs, but I don't want to buy a set and cut them down. I guess I could always slow down but

Hot XL

Worried about digging a footpeg into the road when you're in a sharp turn? One option is to use the large rubber pegs from an older FXR, which are angled on the bottom. This not only gives you extra clearance when installed and angled correctly, but the peg will fold up if you hit the footpeg in a turn.

that's not going to happen, and I don't want to hook up and wind up in a pile of pain! Your help is greatly appreciated, as I don't have a lot of bike shops here in Honolulu. I know it's tough, but somebody has to live here. Big Mahalo!

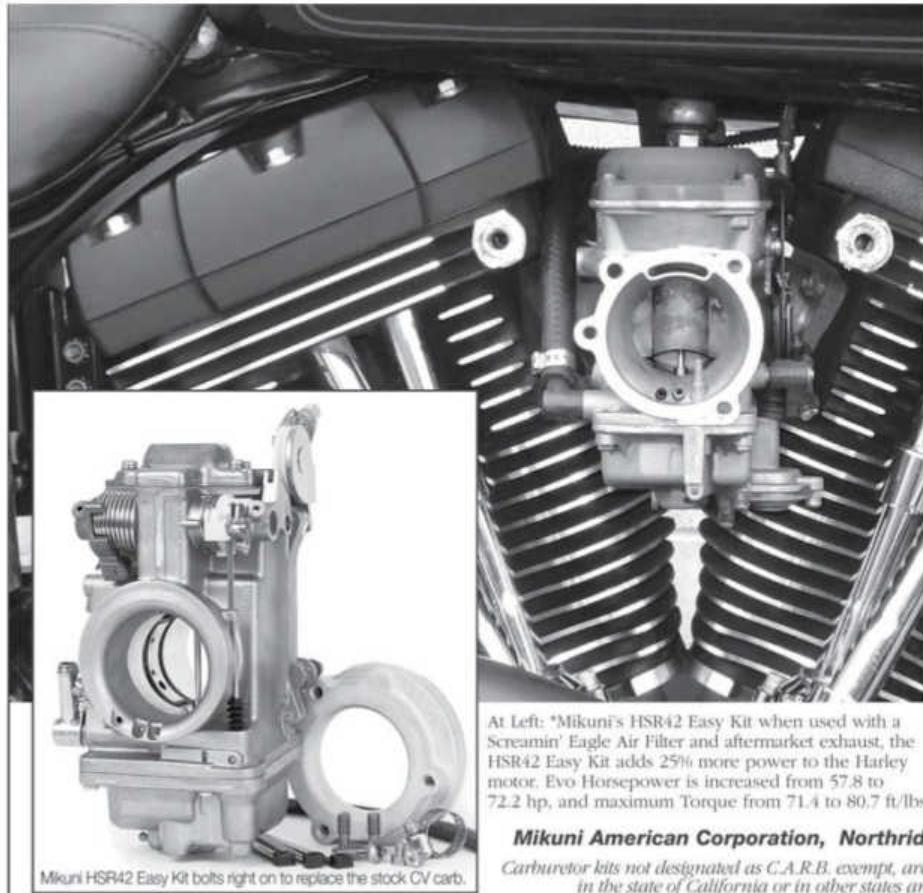
AL SERAFIN
Honolulu

A: Al, you're right about not wanting to dig a footpeg into the road in a turn. It hurts! As for what you can do about it, there are a couple of things you can try. A custom set of billet pegs can be cut down to whatever length you want,

but doing this is a little expensive. Another option is using the large rubber pegs from an older FXR (#50643-82, right/#50647-82, left), which are angled on the bottom. This not only gives you extra clearance when installed and angled correctly, but the peg will fold up if you hit the footpeg in a turn. After looking in a couple of distributor catalogs, I did find a few sets of footpegs that are angled and a smaller diameter or a flatter shape, which can also give you a little more clearance. One thing to be aware of is the angle at which the footpeg is installed. Also, don't overtighten the installation bolt as it will keep the footpeg from folding up and can cause this safety feature not to work. I hope this helps you make a selection.



DAN UMSTEAD
D&S Performance
Lake City, PA



Mikuni HSR42 Easy Kit bolts right on to replace the stock CV carb.

At Left: *Mikuni's HSR42 Easy Kit when used with a Screamin' Eagle Air Filter and aftermarket exhaust, the HSR42 Easy Kit adds 25% more power to the Harley motor. Evo Horsepower is increased from 57.8 to 72.2 hp, and maximum Torque from 71.4 to 80.7 ft/lbs.

Mikuni American Corporation, Northridge CA 91324 USA • www.MikuniPower.com
Carburetor kits not designated as C.A.R.B. exempt, are not legal for motor vehicles operated on public highways in the state of California or in other states and countries where similar anti-pollution laws may apply.

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Twin Cam motor now worn out and running poorly, in need of a major rebuild or replacement? Well now you have no more excuses. This is perfect time to step up to the renown Mikuni HSR42 Carburetor.*

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FACT OF LIFE: BIG GUYS NEED A BIG COMFY SEAT ON THEIR bagger, especially if they like to take long trips. My buddy Big Rick is 6'4" and about 370 pounds. Needless to say, he needs a big comfortable seat to do the long haul riding he prefers, in all kinds of weather. The fix is Mustang's one-piece heated touring seat for Harley FLHTs and FLTRs. Rick picked a plain seat for 1997-2007 Touring models (#76653/\$795), which is also available with studs.

This seat's one-piece design gives both rider and passenger a very comfy ride, according to Rick. And since there are also short big guys, the seat is narrower at the nose than the stock unit so they can get both feet on the ground. Another feature is the rugged, triple-layered fiberglass base-plate, which is open in the middle to accept a Mustang or stock Harley driver backrest kit. Rick went with a Mustang plain smooth backrest (#79067/\$244), which is also available with studs.

Since Rick rides all year, he definitely likes the seat's heated option that's controlled via illuminated high/low switches located on the side of the seat for both rider and passenger. The supplied wire harness hooks into the bike's stock accessory port, which is powered when the ignition key is on and the stock accessory switch is flipped up.

Yup, Mustang has the big guy smiling. **AIM**

SOURCES

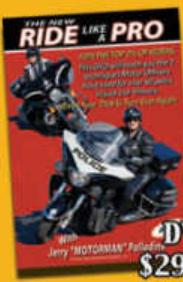
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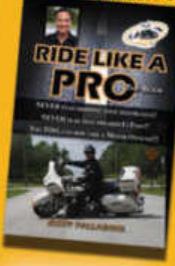
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two sets of zippered front pockets—two side pockets and two chest pockets. These zippers along with the full length front zipper and zippers at the cuffs, all have brushed silver-tone hardware. Padding at the shoulders, neck and lower back add comfort and protection. Open the coat up, and the words to the "Biker's Blessing" are revealed on the nylon lining.

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LEATHERMAN TREAD TOOL BRACELET

A bracelet that has an assortment of tools as part of its links!



WHAT A GREAT IDEA! MAKE A BRACELET THAT HAS an assortment of 29 handy tools incorporated right into the bracelet's links. Dubbed the Tread (\$165), this stainless steel beauty is ready to work whenever you need to do a minor repair or tweak. Just to give you an idea of what I mean, Link 1 has a 3/32" flat-bladed screwdriver and an 1/8" flat-bladed screwdriver. Link 2 has a #1 Phillips screwdriver, 3/16" flat-bladed screwdriver, and a 1/4" box wrench. Link 7 has a 3/32" Allen, 1/8" Allen, and a 3/16" box wrench. The metric crowd was not forgotten either! Link 9 sports a 5mm Allen, 6mm Allen, and a 10mm box wrench. Links 10 and 12 are also fitted with metric Allens and box wrench sizes, as well as some SAE tools. But the Tread is not only equipped with Allens and wrenches. It

also has a cutting hook, pick/Sim card tool, oxygen tank wrench, carbide glass breaker, and #2 square drive. And what multi-tool is complete without a bottle opener! Adjustments are simple and quick. If you need to add or remove a link, it's easily done via a penny and the screws that hold the links together.

Leave it to the crew at Leatherman to come up with another cool tool!

AIM

SOURCES

LEATHERMAN
800/847-8665
Leatherman.com

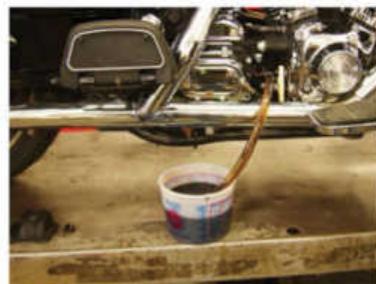


After Using the Scavenger you'll never settle for less.

AFTER WATCHING THIS SIMPLE BUT CLEVER LITTLE device in action, I'll never do an oil change the old way again. But let's start with a few facts about oil changes. After bringing the engine up to operating temperature, so all the nasty crap inside the engine is in suspension in the detergent oil, you should shut down and pull the plug - the drain plug, that is - to get the dirty oil out of your engine before the crud settles out of the oil again. Unfortunately, you can only drain the oil tank. All the old oil that's in the engine and oil lines remain, waiting to degrade the new load of oil.

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Scavenger allows you to reclaim all of the old oil from the engine before it can mix with the fresh oil in the tank. Leaving you with a total oil change. Each Scavenger works a little different depending on the year and model, but each kit comes with clear easy to follow instructions and a DVD with videos of how each one is used.



Seeing is believing so go to www.roguechopper.com and see the video of how it works on your bike. Don't have web access? Call for a free info pack.

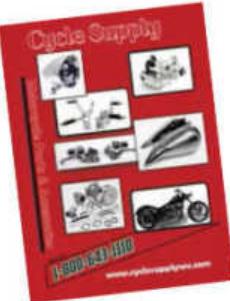
"Like I said, I'll never change my oil the old way again." - Chris Maida **AIM**

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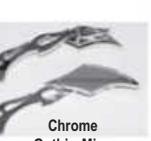
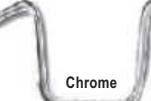
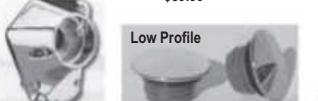
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NO FLUFF HERE! Love your magazine. It's a great read with poignant articles and no fluff. I have attached a photo with my 2012 Harley-Davidson Blackline. Though not highly regarded in its stock form, my 2012 Blackline is now pretty mean-looking, with its custom flourishes and, most recently, the custom artwork on the tank and helmet.

PHILLIP KELMAN

Via Internet



Got a bike you think belongs here? If so, send a few high-resolution (300 dpi at 8" x 8" minimum) images to Letters@AmericanIronMag.com or *American Iron Magazine*, 1010 Summer Street, Stamford, CT 06905.

- EXHAUST
- AIR CLEANER
- BIG BORE KIT
- CAM

Dynojet

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SPRING INTO ACTION Firstly, I love the magazine. I'm a long-time subscriber, and it would be an honor to have my 2001 Heritage Softail Springer published in your magazine. It's got 51,000 miles and lots of chrome.

RICHARD COZZONE
Via Internet



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RETIREMENT TOUR My riding buddy Ken (left) and I have been doing at least one extended tour every year, for many years. We worked together in the oil and gas industry, and now he's retired and living on Vancouver Island. I've got a few months to go and am living near Thorsby, Alberta. Ken makes the trek across the mountains, we hook up somewhere in Southern Alberta or Montana, and it's off to wherever. This year's destination was Salem, Massachusetts. Risking political correctness, we called it the "Witch Hunt Tour." We did the tourist thing in Salem and Boston, and it was very informative and highly recommended. Then, seeing as we were in the neighborhood (sort of), we headed south about 1,000 miles to stop in at the Wheels Through Time museum in Maggie Valley, North Carolina. It was an excellent ride; we did the Smoky Mountains and the Blue Ridge



Mountain Parkway, and we have an excuse to head back that way. AIM is still the best, keep up the good work.

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I Need Less Cowbell!

The factory cowbell horn cover on Harley-Davidsons stands out, but for all the wrong reasons. Set your ride free from the herd with the all-new Krusader Horn Cover from Küryakyn. The Krusader is made from durable, high-quality cast aluminum. Available in chrome or gloss black, riders can customize the aggressive styling with the included chrome or black mesh inserts. Sharp lines and flowing contours create a uniform appearance that blankets the factory horn assembly and center of the V-twin powerplant. Legroom is left intact thanks to the slim design that measures less than 2-1/2" deep. The direct replacement cover fits all 1996-2016 models with the stock cowbell horn cover. \$79.99. Küryakyn, Küryakyn.com.

All claims and specifications are those of the manufacturers. Submissions are welcome and should include a color digital (300 dpi jpeg) image, detailed description, and suggested retail price. Send submissions to Widgets, *American Iron Magazine*, 1010 Summer Street, Stamford, CT 06905, or Widgets@AmericanIronMag.com.

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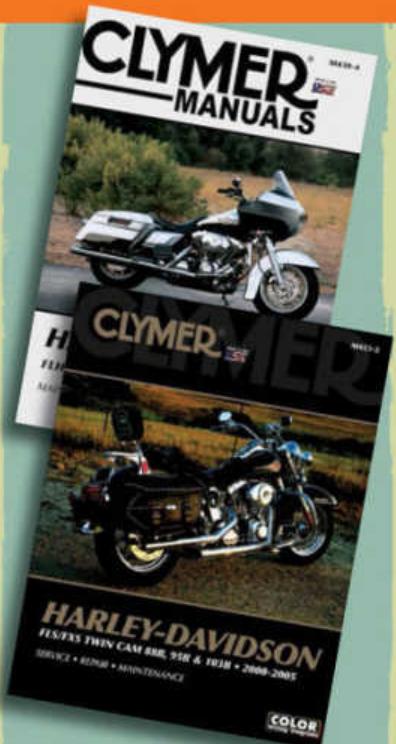
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Big Bike Boards

Big Bike Parts introduces all-new fitments for its popular passenger Beachcomber, Vantage, and Cruis Boards. Tip the scales of style and function with these fresh designs now available with H-D 7/16" passenger mounts. Made from forged aluminum, these boards are CNC-milled for unparalleled strength and durability and finished with Show Chrome Accessories brilliant chrome. Each board utilizes Big Bike Parts' anti-rotation system mount to allow fitments in a 360-degree range and ensures the boards will not pivot once secured. From \$125.95. Info: Big Bike Parts, BigBikeParts.com.



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WIDGETS



Hydraulic Hymec

Hymec, the Magura hydraulic clutch conversion is now available for many street motorcycles, including Harley-Davidsons. The system is compatible with most cable-operated clutch systems and is easy to install. Hymec offers a clear and stable pressure point, reduces clutch pull, and is self-adjusting, meaning no maintenance required. Magura plug-and-play kits come pre-filled with fluid, preassembled, and are ready to install on a variety of street and adventure models including the Harley-Davidson Sportster. Build-your-own kits are also available for even more models. \$299. Info: Magura USA, 800/448-3876, Magura.com.

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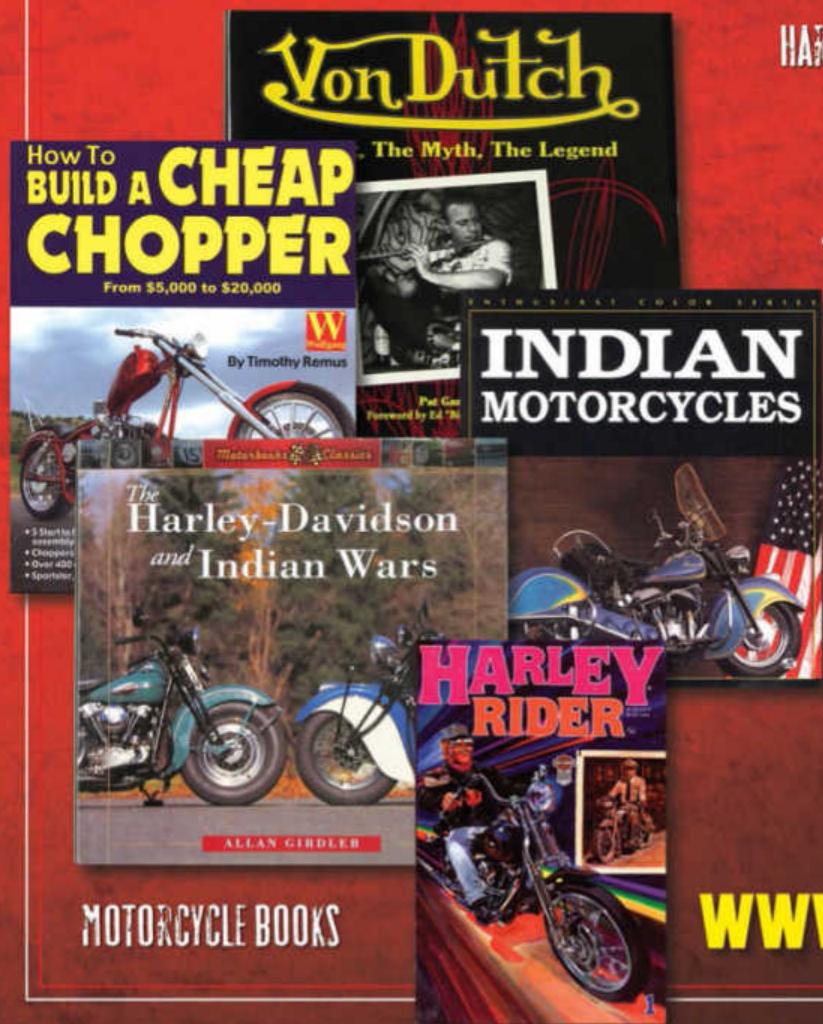


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TECHLINE

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strength alloy called KHV10N was introduced that increased resistance against temper softening. This steel raises the tensile strength of oil-tempered wires to the 2200MPa level. When combined with nitriding treatment and shot peening, KHV10N increases fatigue strength to 1.4 times over SAE 9254 steel. In 2006, Kobe refined the KHV10N alloy into KVH12N, an ultra-high tensile strength alloy creating ultra-fine crystal grains with the addition of larger amounts of chromium and vanadium (V) to further improve the fatigue strength and sag resistance of the valve spring material.

Laminar Flow

LAMINAR FLOW OF AIR OR OIL IS THE opposite of turbulent flow. Both can be efficient and both can be inefficient. Laminar flow is great for air intake into the engine but bad for oil flow in an oil cooler. Turbulent flow is inefficient for air intake but very efficient for cooling oil. Laminar flow is when the air or oil

molecules are cooperating with each other by all moving in the same direction. In an engine's intake tract, this increases air velocity, which moves more volume into the combustion chamber to increase the engine's power output. Turbulent, confused air flow is slower as the molecules go every which way. Thus, air volume suffers with the result being less power. Gasoline cannot burn efficiently unless it's mixed in specific proportions with the oxygen in air.

Laminar oil flow through oil cooler is efficient in moving oil volume but not in cooling. Only the outside surface of the laminar oil flow is exposed to the heat dissipating fins of the oil cooler. The central section of the oil flowing through the cooler retains its heat since it doesn't have good cooling fin access. Thus, turbulent oil flow gives all the oil molecules the opportunity to cool by exposure to the fins.

Conclusion

NEXT MONTH, WE'LL CONTINUE OUR look at various common manufacturing metals and technical terms starting with lock-up clutches.

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HOW IT WORKS

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mount as a fastening point. Baggers with saddlebag guards bolted to the bike at three points provide another option for the strap location near the rear of the bike. However, make sure the straps cannot slip to a looser location.

Straps must be located where they will not rub against any parts of the bike. You don't want to arrive at your destination only to find out that your saddlebag lids or fairing lowers have been damaged by the straps.

The Trailer

TWO THINGS SOME RIDERS FAIL TO consider when transporting a motorcycle on a trailer are insurance and proper registration. Does your state require trailers to be registered and licensed? Different states have different laws regarding trailers. Some states may not have any registration or licensing requirements, while others may require trailers over a certain size or weight to be registered and issued a license plate.

Is your trailer properly insured? Your car/truck insurance may not cover your trailer unless you added a trailer endorsement to the car/truck policy. If you're renting a trailer, the rental agency may insist you buy an insurance policy to cover any loss or damage to its trailer. If you borrow a trailer, ask your insurance agent if you should have a tempo-

rary trailer endorsement on your car/truck for the period of time you'll be in possession of a borrowed trailer.

Make sure the trailer is properly fastened and locked to the hitch. The lock is important to reduce the possibility of a thief stealing the trailer with the bike on it. Use two chains crossed over each other from the trailer frame to the portion of the hitch that's permanently attached to the car/truck frame as a safety precaution in the event of a hitch failure.

Using a trailer hitch with the wrong size ball is a common mistake. Make sure the tow hitch ball is not one size too small.

Conclusion

I'LL CLOSE WITH A CAUTION ABOUT covering a motorcycle that's being transported on an open trailer. I have two covers for my bike. The first is a storage cover that goes over the bike each winter. The other is a touring cover that goes on the bike each night when I'm traveling. Both covers have tags on them that clearly indicate the cover should not be used on a bike while it is being trailered. One reason for this is that the cover's fabric won't withstand the buffeting effects of the wind while the bike is being transported, and the cover may rip. Another reason is that when the bike and the cover are moving along at highway speeds, the cover will be slapping against the bike. The result could be damage to the paint. There are covers made specifically for open trailer transport; be sure to use one of these. **AIM**



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OLD KNUCK IN THE GARAGE

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1946 FL KNUCKLEHEAD

CHRIS GATTO, OWNER OF CYCLE WAREHOUSE IN Butler, Pennsylvania, grew up in the motorcycle business. He's spent his entire life in and around motorcycles. His parents, George senior and Lori Gatto, originally opened the doors of Gatto Cycles in Tarentum, Pennsylvania, back in 1965.

By 1982 the shop became an authorized Harley-Davidson dealership. They went on to open Three Rivers Harley-Davidson in nearby Glenshaw.

Chris worked in the dealerships from a very young age, his chores ranging from repairing bikes to assembly to sales. His two brothers eventually took over the dealerships, while Chris branched out on his own in 2000, buying a 85,000-square-foot building (the old Troutman's Department Store) in downtown Butler to open Cycle Warehouse. He specializes in bikes spanning the gamut, from American to European, to British and Japanese brands. His shop is overflowing with parts and motorcycles, but there's always room for more.

When you're as deeply entrenched in the motorcycle business as Chris is, you're often the first to hear rumors about old motorcycles or stashes of parts. Chris spends a great amount of energy following up on such leads, and if their promising, pursues the bikes and deals that interest him with vested dedication. Our featured bike this month, a 1946 FL Knucklehead, represents one of those deals. It's a bike that Chris acquired after spending years following up on a promising lead.

The chase began about seven years ago when a young boy

was cutting a neighbor's grass whom, by chance, had an old red motorcycle parked in her garage. The young boy mentioned this to his dad, who in turn told Chris about his son's find. Chris eventually made contact with the woman, Dorothy, whose father had bought the bike, a FL, new in 1946 from Toledo Harley-Davidson. He rode the old Knucklehead until 1983, when he passed away. The 1983 plate was still on the bike. Dorothy's dad had restored the bike sometime in the 1970s, so the bike was in relatively good shape, showing wonderful patina. According to Dorothy, her father also had three other motorcycles — another Knucklehead of 1941 vintage, and two Panheads. Conveniently, he had four children, and, upon his death, each child received a motorcycle as part of inheritance.

When Chris asked Dorothy if he could buy the mothballed motorcycle, she mentioned she was in no hurry to sell and apparently didn't need the money. Chris maintained contact with her for the next few years, but the answer was always the same when he called; she was not interested in selling. He tried every technique in the book, even showing her ads with prices of similar bikes. Finally, during one conversation, Chris took a

different approach, suggesting to her that the bike didn't want to sit out in the cold by itself; it deserved to be in a warm place and be ridden as it was intended to be. Her response lacked Chris' romanticism, as she claimed the bike did not feel such emotion. This prompted Chris to say that since there were no feelings or emotions involved here, she should sell. Unfortunately, that argument still fell on deaf



ears. Chris gave up on buying the motorcycle, leaving his number should she change her mind. About a year later, while cleaning out his desk, Chris came upon her phone number, leading to a much different conversation — she was ready to sell. Like anything in life, timing and persistence pays off and Chris had himself a wonderful, vintage, original Knucklehead from the original owner's family!

He told his buddy Paul Tomorelo, a close biker friend who works on Pans and Knucks, about his new purchase. Paul told Chris to bring the old bike to his shop for a closer look. The next morning, it took just about four hours to get the bike up and running so that Chris could take it for a ride. The thrill of banging the old shifter and running through the gears convinced Chris that all the effort and time spent chasing the Knuckle had been worth it.

Being an original 1946 Harley, the bike wears all its original factory parts, one of the great advantages of buying a complete machine from its original owner. The rigid frame and offset springer front end make up the basis of the motorcycle, and it rides on 16" original wheels wrapped with new tires. Being a 1946 model, it has mechanical brakes front and rear. The 74" motor is designated an FL (EL designates a 61" motor, the other option in 1946), and



power is transmitted to the ground via a four-speed transmission with foot clutch and handshifter.

The engine is fired to life via a 6-volt ignition system using a distributor, generator and battery. The buddy seat with helper springs and pogo seat post helps smooth out some of the road bumps. The original Harley speedometer, headlight, beehive taillight, eagle front fender tip, fender chrome, saddlebag mounts, springer horn, and teardrop tool box all help define this beautiful machine.

Nineteen forty-six was the first year for the postwar Harleys, so demand was high from returning soldiers who needed and wanted a quick return to civilian life. Demand for new Harleys remained strong through the

remainder of the decade, too, as America transformed to a peacetime economy.

After acquiring the old Knucklehead, Chris went back and tracked down each of Dorothy's siblings to see if any still retained their dad's other machines. Sadly, they had all been sold off over the years, making this 1946 FL the last Harley to remain in family hands. The bike is now part of Chris' permanent collection and can be viewed at Cycle Warehouse's showroom. Proof, again, that older bikes like this shouldn't be locked up in old barns and garages! **AIM**

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tion, the hotel housed workers from the Pacific Coast Borax Company during the 1920s. In 1967, a professional dancer from New York City named Marta Becket happened upon the abandoned complex of adobe buildings and immediately decided this was where she'd spend the rest of her life. She renovated the recreation hall, painted elaborate murals on the walls, and renamed it the Amargosa Opera House, where she performed for over 45 years. We were told Ms. Becket, now 91 years old and retired, still lives on the property but no longer takes visitors.

Poke around the historic hotel and opera house, and you're likely to encounter haunting spirits, according to hotel housekeeper Serena Revere. "There's ghosts all over this place," she claimed. "[One] plays little games with me. He likes to open the curtain all the time. My boss says she wants it closed, so I spend a lot of days closing that curtain, and I think he's [the ghost] laughing the whole time."

It seems there are lots of ghosts out on the open road in this part of the country. You just have to know where to look. And one place you can start your journey is the state of Nevada, or nearby Death Valley, California. **AIM**

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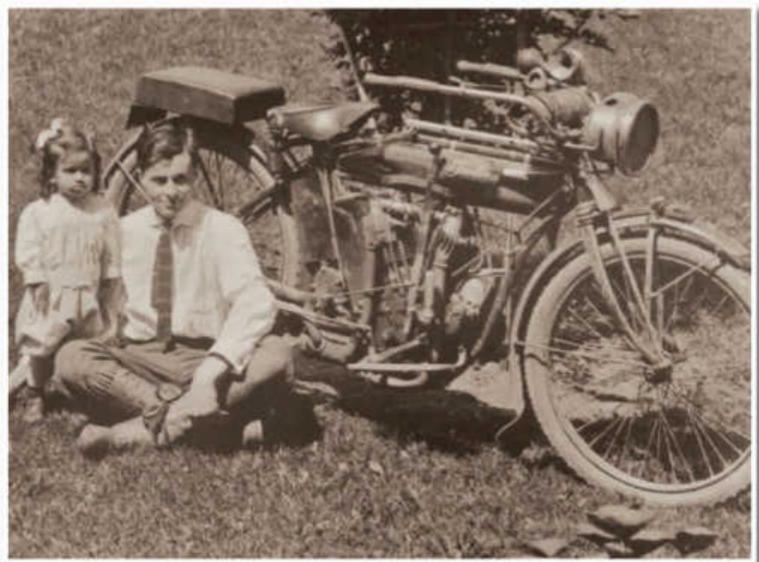


We got a very short message from Jamie Colucci that states "Pic was taken in 1916. Year of Indian is unknown. The girl is my grandmother Helen Farrar." Well, alright then! We think the Indian is an early teens Power Plus twin.

JAMIE COLUCCI
Waterbury, CT

Jesse Melvin wrote in and told us, "What a surprise to see a 1936 Harley 80 featured in issue #331 on page 102." Jesse also attached a photo of his parents, Keith (who was 19 at the time) and LaVola Melvin, taken in the Everett, Washington area. Jesse also stated that he was told that his dad's bike was a retired highway patrol 1936 80" flathead Harley-Davidson, but there was always a debate about the year and engine size. We think that's the right year and model, Jesse. Jesse currently rides a 2014 Dyna Low Rider.

JESSE MELVIN
Homer, AK



If you have a submission to Memories, send it with all the info you have about the image to Letters@AmericanIronMag.com or Memories, *American Iron Magazine*, 1010 Summer Street, Stamford, CT 06905. If we use yours, you'll get a free one-year subscription or extension (let us know which). Do not send the actual photo, only a high-resolution image.



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